The Harveian Oration.

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MR. PRESIDENT, FELLOWS OF THE COLLEGE, AND GENTLEMEN HONOURING US BY YOUR PRESENCE TO-DAY,—It has long been the custom in the several ancient colleges of our universities to commemorate the founder and the benefactors on some particular day. The members of the colleges are assembled, the history of the foundation is related with due solemnity, and the names of the benefactors are mentioned with honour and gratitude. Dr. William Harvey, the illustrious man by whose injunction we are assembled to-day, was familiar with this custom, for it was enjoined by the founder of his college at Cambridge, Dr. John Caius, a physician who not only possessed learning but venerated it and had considered those ceremonies and decorations which are as appropriate to learned societies as the fine paper, well-formed type, and beautiful bindings in which great scholars and great readers such as Aldus, and Grolier, and Thuanus, and our own Bentley delighted to see good literature clothed. It was Caius who gave us the silver rod which our President carries at every meeting of this College. He desired that we should be ruled with the mildness and clemency which a silver sceptre typifies, while the four serpents which ornament the sceptre are to remind the President that wisdom is to govern his conduct. Dr. Caius when in London lived within the enclosure of St. Bartholomew's Hospital, and the first College feast was held there in 1556, exactly a 100 years before the delivery of the first Harveian Oration. There Dr. Caius died in 1573, a benefactor of the study of medicine, in which he was the first Englishman to write an original description of a disease,[1] to learning in general by the foundation of his college at Cambridge, to the poor of London by a gift to St. Bartholomew's Hospital, and to this College in several ways. In his annals of Caius College a resolution is recorded under the date Oct. 6th, 1531, urging the duty of gratitude and of the remembrance and record of benefactors. Thus it was early in life, at Caius, that Harvey learned the value of such acts of public gratitude as that which, on his institution, we keep to-day. Sir George Paget, a former fellow of Caius and of this College, Regius Professor of Physic in the University of Cambridge, and an example there of all that a physician should be, has shown that it was probably the teaching of anatomy instituted in his college by Caius which led Harvey to those studies in which his fame is immortal. There, too, he was imbued with the spirit of good fellowship in learning which was then prevalent in the University and has ever since pervaded its atmosphere. Caius had fostered this spirit in the college he founded which, robed in the architectural garb of the Renaissance, appropriately comes into view of a visitor to Cambridge immediately after the foundation of King Henry VI., refulgent with the last glorious days of mediæval learning.

The poets who knew Cambridge have told in verse what every man worthy of a liberal education has felt. Milton of Christ's, disposed as he was to resist the natural effect of religious art, was nevertheless profoundly affected by great architecture and has left the world the better by the impression which he received as an undergraduate from the chapel of King's :—

> "But let my due feet never fail
> To walk the studious cloisters pale,
> And love the high embowèd roof,
> With antic pillars massy proof,
> And storied windows richly dight,
> Casting a dim religious light."

Wordsworth of St. John's, trying to study the depths of his own mind, found himself deeply affected by his surroundings :

> "I could not print
> Ground where the grass had yielded to the steps
> Of generations of illustrious men
> Unmoved. I could not always lightly pass
> Through the same gateways, sleep where they had slept,
> Wake where they waked, range that enclosure old,
> That garden of great intellects—undisturbed."

Cowley of Trinity, a lesser poet than these, seems by the power with which he expressed another of the feelings of university life almost to justify Clarendon's remark that in his time he had in poesy "made a flight beyond all men."

> "Ye fields of Cambridge, our dear Cambridge, say,
> Have ye not seen us walking every day?
> Was there a tree about which did not know
> The love betwixt us two?"

The introduction into the family of great minds, the permanent association with a venerable collegiate home and its usages, the ties of friendship—by all these Harvey had been influenced during his residence at Cambridge from 1593 to 1598. When he migrated to this College in the midst of a busy world, *Fumum et opes strepitumque Romæ*, yet no less devoted to one of the highest branches of learning, he was kindly received. Two physicians deserve commemoration for their early kindness to him; one was Dr. Ralph Wilkinson of Trinity College, Cambridge, in relation to whom he occupied at St. Bartholomew's the position which, Mr. President, I now have the honour with infinite advantage and satisfaction to myself to occupy towards you. The other was Dr. Lancelot Browne of Pembroke College, Cambridge, who had been one of the proctors in 1573, the year in which Edmund Spenser of that college took his degree. Perhaps Browne was one of the learned wits of whom the poet was thinking when he celebrated the Cam in the Fairie Queen :—

> "My mother Cambridge, whom as with a crown
> He doth adorne and is adorned of it,
> With many a gentle muse and many a learnèd wit."

It was Dr. Browne's daughter Elizabeth whom Harvey married in 1604. His life in our College was one of continued friendship and learned conversation. He was welcomed in his youth, applauded in his discoveries, venerated in his age. When his life ended in 1657 his body was accompanied beyond the walls of the City by the President and the whole College on its way to its last resting-place at Hempstead in Essex. Our College was of about one-tenth its present size when Harvey was admitted, but it was nevertheless a society in which a great variety of learning was to be found and where a man could spend his days with advantage. His entrance into it was gradual, for those were the days, as Clarendon says, "when men were seen some time before they were known and well known before they were preferred." Harvey's relations with this College began in the first year of King James. At a meeting on April 21st, 1603, the Fellows had discussed whether they should go out to meet the King at his entry into London and salute him "*solemni oratione*." At the next meeting on May 4th, 1603, "Mr. Harvie, doctor of medicine in the University of Padua, attended and presented himself for examination and when examined answered to all questions sufficiently well." Nevertheless he was put off to another time, "*cum conniventia ad Praxin*," that is, with informal leave to practise in the interval. He appeared again on April 2nd, 1604. "Dr. Harvie was examined for the second time for the degree of candidate and his answering approved." At his first examination he was the sole candidate and only the President, Dr. Richard Forster, and three Fellows were present, a small attendance perhaps due to the plague then prevalent. At the second examination John Craige (the King's physician, newly come with His Majesty from Scotland), Thomas Hearne (an Oxonian, who like Harvey had graduated at Padua), Thomas Lodge (the poet), and Thomas Rawlins of Clare Hall, Cambridge, were also examined, and all approved but Lodge. On May 11th, 1604, Harvey was examined and approved for a third time and had for his companions Rawlins, Hearne, Edward Elwin of Corpus Christi College, Cambridge (afterwards physician to the King's household), and three poets, Matthew Gwin, Thomas Lodge, and Raphael Thorius. Of these poets Gwin was afterwards admitted a Fellow of the College. In our society, where, for the most part, we think,

> "Nobis non licet esse tam disertis,
> Qui Musas colimus severiores,"

it is remarkable that literature has never been neglected. In the translation of Plutarch's Lives, edited by Dryden,

[1] A Boke or Counsell against the disease commonly called the Sweate or Sweatyng Sickenesse: made by Jhon Caius doctour in Phisicke. 1552.

10 Fellows of this College,[2] three of whom afterwards filled the office of President, took part; and to a greater biographical work of the present day, the greatest indeed which has appeared in our literature, you, Sir, have made a contribution, as well as our learned librarian, Dr. Payne, and some other Fellows of the College.

At the present day we have in Robert Bridges a master of verse which is both praised and read. Arbuthnot, steeped in literature, gave a poetic form to thoughts which must constantly occupy the minds of physicians:

> "Am I but what I seem, mere flesh and blood,
> A branching channel with a maxy flood?
> The purple stream that through my vessels glides
> Dull and unconscious flows like common tides,
> The pipes through which the circling juices stray?
> Are not that thinking I, no more than they?
> This frame, compacted with transcendent skill
> Of moving joints obedient to my will,
> Nursed from the fruitful glebe like yonder tree,
> Waxes and wastes: I call it mine not me."

Sir Samuel Garth was a popular poet for 50 years and to this day one couplet in his "Dispensary"—

> "To die is landing on some distant shore
> Where tempests never beat nor billows roar"—

is known to everyone because it was admired by Cowper and is quoted by him in one of the most affecting poems in our language.[3] Harvey himself is one of the heroes of "The Dispensary":

> "They hasten now to that delightful Plain
> Where the glad Manes of the Bless'd remain:
> Where Harvey gathers simples, to bestow
> Immortal youth on Heroes' shades below.
> Soon as the bright Hygeia was in view,
> The Venerable sage her Presence knew.
> Thus he:
> 'Hail, blooming Goddess, thou propitious power,
> Whose blessings mortals more than life implore.
> With so much lustre your bright looks endear,
> That cottages are courts where those appear.
> Mankind as you vouchsafe to smile or frown
> Finds ease in chains, or anguish in a crown.'"[4]

The poets who began the march to fame with Harvey and whose poetic fancies were afterwards so far surpassed in repute by his precise facts deserve to be mentioned if only because they were associated with him on an important day of his life.

Matthew Gwin was the first professor of physic at Gresham College where he lectured from 1598 to 1607. He was an accomplished Latinist and took part in a medical disputation at Oxford for the entertainment of King James I. and his Queen Anne. He had to argue on the question whether the morals of nurses were imbibed by infants with the milk. It was a delicate point, for the King had had a drunken nurse and was always anxious that he should not be thought to have imbibed her evil nature. The King drank a good deal, yet his most steadfast brain, says Sir Theodore Mayerne,[5] was never disturbed by sea or by wine. Gwin published a Latin comedy, called *Vertumnus*, which was acted at Magdalen College, Oxford, and a Latin tragedy, *Nero*, based upon Tacitus, Suetonius, Dion Cassius, and Seneca. The epilogue of the comedy, where three sibyls hail King James by the several titles of his increasing dominions, is sometimes thought to have suggested to Shakespeare the famous salutations of the witches in Macbeth. The tragedy displays the reading of its author, but perhaps Dr. Gwin's last lines about Nero the Emperor may be applied to *Nero* the tragedy:

> "Restatque de Nerone tam magno nihil
> Nisi quod sepulchrum condat aut ignis cremet."

Gwin had disputed before King James with Sir William Paddy, a benefactor here and at St. John's College, Oxford, as to whether smoking tobacco was conducive to health. Raphael Thorius, the Licentiate who attended to be examined with Gwin and Harvey, treated the same subject in a poem of two books, and in spite of the Royal opinion against tobacco did not veil his own love for the fragrant weed, and he begins his "Hymnus Tabaci":

> "Innocuos calices et amicam vatibus herbam
> Vinque datum folio, et lati miracula fumi
> Aggrediar"—

and goes on to dedicate it to Sir William Paddy than whom, says Thorius, no one knew better the varied powers of the disease-repelling plant. Thorius wrote many lesser poems now chiefly interesting as showing his tastes and friendships. Three which have never been printed are addressed to L'Obel, the botanist, who was in practice in England as an apothecary, but who is known to few of the many who have the lobelia growing in their gardens. In 1625 Thorius sent his wife and family out of London to preserve them from the plague and, diligently attending to his patients, became infected and died.

Thomas Lodge, the third of the poets examined on the same day as Harvey, was a schoolfellow of Sir William Paddy, our President of 1609. He began life as a poet and ended it in the practice of medicine after a varied career, part of which was spent, as he says, "as a soldier and a scholler," and another part as a sea rover, hardly to be distinguished from a pirate. His story of "Rosalynde," written at sea "rough as hatcht in the stormes of the ocean and feathered in the surges of many perillous seas,"[6] and published in 1590, will always be memorable in literature for some fine lyric verses and still more as the source of the plot of Shakespeare's *As You Like It*. Lodge was often unfortunate in letters and in adventure and was so in his entrance to this College, for he did not receive a licence till 1609. He more often expresses gloom than cheerfulness in his verses and the feelings exhibited in a stanza of his "Margarite of America," written amid "bitter and extreme frosts at midsummer" in the Straits of Magellan, seem to have been often his:—

> "From height of throne to abject wretchednesse,
> From wondrous skill to servile ignorance,
> From court to cart, from rich to rechlesnesse;
> The joys of life have no continuance.
> The King, the catiffe wretch, the lay, the learned,
> Their crowns, woes, wants, and wits with griefe have earned."

On August 7th, 1604, at the house of Dr. Forster the President, Harvey and Elwin were again examined and Lodge was rejected. On Oct. 5th, 1604, the two former were sworn as candidates.

Of those who had been examined with him and approved Harvey was the last to be elected a Fellow. At that period the influence of great persons was sometimes brought to bear upon the College in the election of Fellows: Dr. Rawlins had a letter from the Archbishop of Canterbury; Dr. Gwin was recommended by Ellesmere, the Lord Chancellor, and by Thomas, Earl of Dorset, Lord Treasurer and Chancellor of the University of Oxford; and Dr. Elwin by the Earl of Suffolk, the Earl of Northampton, and the Earl of Salisbury, and by Lord Stanhope, and they were elected Fellows on Dec. 22nd, 1605, and Harvey not till May 16th, 1607. It is just to state that they were all older men. He took the oath and was admitted on June 5th, 1607, with two others, Dr. Matthew Lister, an Oxonian, and Dr. William Clement of Trinity Hall. Lister was afterwards knighted and became physician to the Queen of James I. and to King Charles I. as well as to Mary, Countess of Pembroke, in whose house he spent much time. He must often have talked to Ben Jonson, another frequenter of her house, and was, perhaps, one of the first to read and admire the epitaph written for the stately tomb which she deserved but which was never erected in Salisbury Cathedral, her place of burial:—

> "Underneath this sable hearse
> Lies the subject of all verse—
> Sidney's sister, Pembroke's mother.
> Death! ere thou hast slain another
> Learn'd and fair and good as she,
> Time shall throw a dart at thee."

Clement, who like Harvey was a doctor of Padua, afterwards became Registrar of our College. Both he and Lister were industrious physicians, but all that has survived of their writings are four Latin verses by Lister and two by Clement, all in honour of the only medical book of Ralph Winterton, Regius Professor of Physic at Cambridge—a work which has perhaps received more praise from the learned than any other book written by a professor of medicine in that University. It is an edition of the "Aphorisms" of Hippocrates with a translation into Greek

[2] Dr. John Bateman (President, 1716–18)—Aratus; Dr. Edward Browne (President, 1704–7)—Themistocles and Sertorius; Dr. Walter Charleton (President, 1689–91)—Marcellus; Dr. William Crowne—Pyrrhus; Dr. Phineas Fowke—Phocion; Dr. Charles Frazer—Marcus Antonius; Dr. Thomas Fuller—Cicero; Sir Samuel Garth—Otho; Dr. Walter Needham—Agesilaus; and Dr. Thomas Short—Philopœmen.

Cowper—"On the Receipt of my Mother's Picture out of Norfolk":

> "So thou with sails how swift hast reached the shore
> 'Where tempests never beat nor billows roar.'"

[4] The Dispensary: Canto vi., l., p. 298.

[5] MS., Sloane, 1679 (British Museum), fol. 42.

[6] Rosalynde, Euphues golden legacie, London, 1590, p. 4 (reprint).

verse by Winterton, with also a Latin prose version and a translation into Latin verse. It was lauded in Latin or Greek verse by 17 Fellows of this College and two who subsequently became Fellows, one of whom was the celebrated Francis Glisson; by members of all the colleges at Cambridge but one and of several of the colleges of Oxford; while two university professors and the heads of Peterhouse, Queen's, Christ's, and Trinity commended it in Latin prose. What Johnson says of Pembroke College, Oxford, in his own time—"Sir, we are a nest of singing birds"—might have been declared of the College of Physicians in the reign of King Charles I.

Dr. Henry Atkins, the President, and afterwards a benefactor, of the College, was in the chair at the College meeting at which Harvey with Lister and Clement were admitted to the Fellowship. He was physician to James I. and is said to have been the first person to whom in 1611 that monarch offered the new rank of baronet. The first edition of our Pharmacopœia was published in 1618 under his auspices. Fourteen other Fellows were present, 10 of Harvey's University and four Oxonians,[7] while three of the 14 were doctors of Padua.[8] The business transacted after the new Fellows took their seats at the table is recorded in the "Annals." Dr. Mark Ridley was elected a censor in the room of Dr. William Dun, deceased. It was resolved that Dr. Edward Elwin should entertain the Fellows at a feast on the first Tuesday in the following July. Dr. Lister was to make preparations for the demonstrations in anatomy. Everyone was to try to learn where a certain Dr. Bonham had practised. Dr. Thomas Davis was elected Lumleian lecturer in succession to Dr. William Dun. Harvey, it will be remembered, succeeded Davis in this lectureship in 1615.

It would be pleasant to trace Harvey's relations with these and with the Fellows of subsequent elections throughout his time,

> "But at my back I always hear
> Time's wingèd chariot hurrying near."[9]

One of those present at his admission was Dr. John Argent of Peterhouse who became *amicus suus singularis* and to whom with the College, of which Argent was then President, he dedicated in 1628 his "Exercitatio Anatomica de Motu Cordis et Sanguinis in Animalibus." The dedication shows how happy was his association with his contemporaries:

> Since my book alone doth assert the blood to move and circulate by a new route quite different from that held, taught and explained through so many ages by countless and most illustrious and learned men I feared that I might be thought presumptuous if I should allow my little book which had been completed some years back to be published or sent over sea unless first I had stated it to you and had confirmed it by anatomical demonstration and had made answer to your doubts and objections and had received the judicial commendation of our illustrious President.

How plain are the friendly relations between Harvey and the other Fellows. Argent was his senior, as were those friends whom I have before mentioned, Wilkinson and Launcelot Browne, but he had also warm attachments among his juniors and none greater than those which bound him to George Ent and to Charles Scarborough. Ent was not three years old when Harvey was admitted a Fellow. They probably met for the first time in Rome in 1636. Ent had gone thither after five years' study at Padua which had succeeded his graduation at Sidney-Sussex College, Cambridge. They were both guests at dinner at the English College in Rome on Oct. 5th, 1636. Lovers of truth and members of the same university caring for the same branches of learning easily become friends, however different their ages, and the natural admiration which youth feels for old experience cements the frendship of generous minds. Of this there are fewer pictures more happy than Ent's account of Harvey in the dedication of the "De Generatione Animalium" to the President and Fellows of the College of Physicians in 1651. His preservation of this interesting treatise which might have been lost with other manuscripts of Harvey but for him, puts us under a debt of gratitude to Ent, who was President from 1670 to 1675 and Censor for 22 years, and he was also one of our pecuniary benefactors. Charles II. attended one of his anatomy lectures and knighted him afterwards in the College. Thus it is in every way appropriate that his arms, sable between three hawk-bells a chevron or, should form part of the ornament of the Censor's room, to which they were brought from the old College in Warwick-lane.

Charles Scarborough, knighted by Charles II. in 1669, was younger than Ent. He obtained a Fellowship at Caius College and, ejected from his Fellowship as a Royalist, entered at Merton College, Oxford, when Harvey was Warden, and ever after enjoyed his friendship. Thus what seemed a misfortune, as is so often the case, proved his greatest advantage, and he might have said more truly than Dryden—

> "Oxford to him a dearer name shall be
> Than his own mother university."

But this is no reason why a recent learned writer in his "History of the Study of Mathematics at Cambridge" should speak of him as "a teacher of the mathematics at Cambridge of whom I know nothing more." He was learned in mathematics; he had a fine mathematical library; and he translated Euclid. He was one of the famous men of his day and everyone who has read Johnson's "Lives of the Poets" will remember how Waller when he found his legs grow tumid "went to Windsor where Sir Charles Scarborough then attended the King, and requested him, as both a friend and a physician, to tell him what that swelling meant. 'Sir,' answered Scarborough, 'your blood will run no longer.' Waller repeated some lines of Virgil and went home to die." Scarborough was physician to three kings in succession, but will always be best remembered as the friend of Harvey and his successor at Harvey's request in the Lumleian lectureship. Harvey left Ent £5 to buy a memorial ring, and of Scarborough in his will says: "I give my velvet gown to my loving friend Dr. Scarborough and to Dr. Scarborough all my little silver instruments of surgerie."

These examples show Harvey's feelings towards the men with whom he spent his life. He had known something of what is called "the great world." King Charles I. seems to have liked Harvey, who probably saw him in his best aspect and in intellectual relations which brought out his mental abilities and did not lead to the exhibition of those defects of character and of manner which, more than the turbulence of his subjects or the ambition of their leader, brought him to his tragic end. All Harvey's writings show him to have been simple and truthful, so that we may believe that what he had seen of the King had bred in him the admiration expressed in the dedication of his great book, where he compares the heart of animals, the sun of their microcosm, to the King in the State, the sun of his microcosm.

Harvey went to Italy in 1636 with Thomas Howard, Earl of Arundel. That nobleman's figure and manner are known to subsequent generations by his portrait in armour by Rubens and his description in Clarendon's History: "It cannot be denied," says the statesman, "that he had in his person, in his aspect and countenance the appearance of a great man which he preserved in his gait and motion. He wore and affected a habit very different from that of the time such as men had only beheld in the pictures of the most considerable men, all which drew the eyes of most and the reverence of many towards him as the image and representative of the primitive nobility and native gravity of the nobles when they had been most venerable." Even if he knew only a little about the vast collection of marbles, paintings, and manuscripts which he made abroad his table must have been one at which the conversation was worth attention. But it was in his own profession and in this College that Harvey found his most congenial society. Here were his happiest associations and the endowment of the oration was a sort of memorial of his life in the College.

How many men have generously tried, without vanity and in pure goodness of heart, to preserve for future generations some reminiscence precious to them of something in their own lives. What more striking example of this motive of benefaction could there be than the history of two Fellows of our College—Sir John Finch and Sir Thomas Baines. Finch, son of Sir Heneage Finch, Speaker of the House of Commons, graduated at Oxford in 1647. Two years later he went to reside in Christ's College, Cambridge, where he was introduced by Henry More, the Platonist, then tutor, to Thomas Baines of that college. They became friends at once and, the times making life in England uncomfortable for loyal men, both went to Padua, and there graduated M.D. On the King's restoration they came to England, and on Feb. 26th, 1661, were both elected Fellows of this College, a circumstance which it is proper to mention to-day, since our "Annals"

[7] Oxonians: Dr. Henry Atkins, Dr. Richard Foster (All Souls), Dr. Edward Jordan, Dr. Thomas Hearne (Brasenose), and Dr. Matthew Gwin (St. John's). Cantabrigians: Dr. William Baronsdale (St. John's), Dr. Thomas Friar (Trinity), Dr. George Turner (St. John's), Dr. Ralph Wilkinson (Trinity), Dr. Thomas Moundeford, Dr. Mark Ridley (Clare), Dr. Edward Lister (King's), Dr. John Argent (Peterhouse), Dr. Daniel Selin (Magdalene), and Dr. Thomas Rawlins (Clare).

[8] Friar, Jordan, and Hearne.

[9] Andrew Marvell.

declare that the election, which was not to be drawn into a precedent, was on account of all the benefits conferred on the College by the illustrious Dr. Harvey, "*nobis nunquam sine honore nominandi*," and by his brother Eliab. Finch's brother, the first Earl of Nottingham, a prominent and incorruptible statesman of Charles II.'s reign, had married Harvey's niece Elizabeth, the daughter of his brother Daniel, and it is a pleasant example of the honour in which Harvey was held after his death that this connexion was the ground of the election. I have seen a letter which shows that Harvey was respectfully remembered at Burley-on-the-Hill. It was written in 1719 and is dated "December 28th, the day on which poor Queen Mary died," and is from his wife to Daniel, second Earl of Nottingham. She is anxious about his health and advises him to copy from "your father's receipt book where among some directions of Dr. Harvey's I think there's one how the bone of a stag's heart is to be taken." Her ladyship adds that it may be unnecessary to take so serious a remedy but that none the less it will be well for her lord to have it by him. Finch cared for no honour which could not be equally conferred upon Baines, and when the King knighted him for services to the royal cause performed in Tuscany his request that his friend might be knighted too was granted. In almost every letter home Finch mentions Baines and, what is not always the case in such friendships, the family of Sir John Finch seem to have shared his attachment, as well as his respect for Baines as a physician. "Most dear nephew," says the Ambassador, writing from Pera, August 21st, 1680, "Sir Thomas Baines will write about the indisposition of your daughter" and the nephew (Lord Nottingham) writes to a friend, "The loss of Sir Thomas Baines was very great to me for I am sure he loved me." They were soon after incorporated doctors of medicine at Cambridge at the same congregation. In 1665 Finch was sent as Minister to the Grand Duke of Tuscany and in 1672 he succeeded Sir Daniel Harvey, Harvey's nephew, as Ambassador to the Sultan. Baines went to each court as physician to the embassy, and it was known, as is told in the Life of Sir Dudley North, that if you wanted to obtain any privilege at the embassy you must convince both Finch the Ambassador and Baines, whom the merchants called "the Chevalier." Baines died in September, 1682, and Finch resigned his office and returned home with the body. "I need not tell you," says his nephew in a letter which I have seen, "how deplorable a condition my poor uncle was in to lose so good a friend after 36 years' acquaintance. A few months later he died, not so much from fever and pleurisy as from the loss of Sir Thomas Baines. They founded two fellowships and two scholarships in remembrance of their own life-long friendship and in the hope that other such friendships might in after times be formed. They were both of dark complexion and grave aspect, as may be seen in two singularly fine portraits by Carlo Dolci in the drawing-room of Burley-on-the-Hill. They are buried under one marble canopy in the chapel of Christ's:—

> "Whom joined in fame in friendship try'd
> No chance could sever nor the grave divide."[10]

It was a similar feeling arising from the recollection of past happiness which led Harvey, who had often sat at table with the Fellows of this College and had enjoyed their conversation and lectured here for nearly 40 years, to establish the ceremony in which we take part to-day to commemorate benefactors, to promote kindly feeling, and to remind physicians that it is one of their duties to wrest secrets from nature for the improvement of medicine and the consequent benefit of mankind.

The oration used, as he had desired, to be in Latin, then the language of learning, of diplomacy, and of the literature which every educated man made his own—the Latin not only of the classics but of Augustine and Jerome, of Justinian, of Anselm, of Erasmus, of Scaliger, and of Grotius. The sympathy of our College with the revival of classical learning naturally led our orators to use the Latin of the Augustan age, not that living language, as it might justly be called, of the Church and the Law, so often condemned by scholars but deserving of our respect as men when we consider how many great minds have thought in it and how closely it is often associated with the very highest aspirations of mankind. It was, of course, the custom of Fellows of this College to address the learned in their works and to write in Latin. Few medical books of the highest order were written in English by the Fellows of our College before "The Morbid Anatomy of Some of the Most Important Parts of the Human Body" of Dr. Matthew Baillie, afterwards a generous benefactor, which appeared in 1793, and the last great book in Latin was the "Commentarii de Morborum Historia et Curatione" of Dr. William Heberden, which was published in 1802, 12 months after his death in his ninety-first year. Let no one be led by a veneration for Latin literature to regret that our own language has since 1864 been substituted for Latin at this celebration. When Harvey gave his first lectures English literature was already rich, for the works of Shakespeare were complete and Chaucer, Spenser, and Marlowe and Beaumont and in prose the Chronicles, and the English writings of More, Fisher, Latimer, and Hooker, some fine versions of classical authors, and the first collection of Bacon's Essays, and many other good books were easily to be obtained, yet men had hardly come to understand with Ben Jonson how far the literature of the ancients had been surpassed.

> "I will not seek
> For names; but call forth thund'ring Eschylus,
> Euripides, and Sophocles to us,
> Paccuvius, Accius, him of Cordova dead,
> To live again, to hear thy buskin tread,
> And shake a stage: or when thy socks were on,
> Leave thee alone for the comparison
> Of all that insolent Greece or haughty Rome
> Sent forth, or since did from their ashes come.
> Triumph, my Britain, thou hast one to show
> To whom all scenes of Europe homage owe.
> He was not of an age, but for all time,
> And all the Muses still were in their prime,
> When like Apollo he came forth to warm
> Our ears, or like a Mercury to charm."[11]

Since Harvey's day our literature, great as it was even then, has received such excellent and varied additions that it must always live among the noblest literatures of the world. How far do the speeches of Burke, greatest of political philosophers, surpass those of Cicero and of Demosthenes in depth of thought and in grandeur of expression; with splendid sentences, yet owing their force not to ornament but to the perfection with which they make clear the lofty argument and profound consideration of the subject. The verses of Dryden and of Milton, of Cowper and of Byron have shown what force metre may give to English, while the prose of Clarendon and Dryden, of Swift and Addison, of Bentley, of Johnson, of Fielding, of Goldsmith, of Blackstone, of Macaulay, and of Newman exhibit the extraordinary variety of excellence possible in the language. Is not Herrick superior to Catullus? and what ancient comedy approaches *She Stoops to Conquer* in the happy combination of the comedy of words with the comedy of action? Will not the letters of Cowper and of Swift and of Gilbert White bear comparison with those of Cicero and of Pliny? What is there in Latin literature which can be compared with the novels of Fielding or of Thackeray? Who would prefer Petronius Arbiter, or even—considering the Latin of later times and to mention one of the few romances which Harvey is likely to have read—who would be well advised to take up the "Argenis" of Barclay when he had within reach the "Vicar of Wakefield," the "Pickwick Papers," or the happy delineations of English everyday life of Jane Austen? Great as must always continue our admiration for classical Latin, willingly as we must reverence its dignity, its precision, its grace, deeply as we must feel that we have no authors who are the equals of Virgil and of Horace and of Lucretius in their several kinds, let us never regret its disuse on this day since we have substituted for it the language of our own far greater literature.

Harvey, following the good old custom which he had observed at Cambridge in accordance with the injunctions of Caius, desired us to commemorate our benefactors by name. We are not a rich society, but we have had many benefactors. Some good men have given us land and money, others have given us books, some pictures or busts, while others, again—and these are perhaps the greatest benefactors of all—have added to our corporate glory by the fame of their discoveries or of their learning. All these are our benefactors. We are grateful for a charter to the Sovereign who then styled himself "Henry, King of England and France, and Lord of Ireland." He favoured us in his best days and when in the tenth year of his reign he established our

[10] Tickell: To the Right Honourable the Earl of Warwick on the Death of Mr. Addison, Dodsley's Poems, I., 29.

[11] Ben Jonson: To the Memory of my Beloved Master, William Shakespeare, and what he hath left us.

corporate existence he deserved the commendations of More, who says in a letter to Bishop Fisher, "He is so affable and courteous to all men that each one thinks himself his favourite." Some of those to whom gratitude is due I have already mentioned, and as I cannot pretend to so terse a style as Thomas Newton of Cheshire,[12] who praises 215 botanists in 54 lines of Latin verse, I cannot hope to mention all our benefactors as they deserve.

Thomas Linacre, our founder, has impressed upon succeeding generations of physicians in England his own high ideal of what a physician's character and learning should be. His house in Knightrider-street was the first home of our College. He seems to join the ancient and the modern world, for he could remember the printing of the first book in England and learned Greek from Demetrius Chalcondylas, a Greek of Byzantium who read Homer as we should read Chaucer, conscious that the poems were in our own tongue whatever differences there might be of vocabulary or of phrase. Our library contains the noble Milan edition of 1499 of the Greek Lexicon of Suidas which was prepared by Linacre's teacher. It has no title-page, like many of the early printed books, but begins with a dialogue in Greek between the bookseller and a learned man which ends with an inquiry as to the price. "*χρυσῶν τριῶν*"—three gold pieces—says Bibliopoles. "Take them and give me the book," replies Philomathes. It is easy to imagine with what pleasure our founder must have contemplated such a book. The type is perhaps a reproduction of the Greek hand of Demetrius. Well-formed it is and impressed upon fine paper, yet as the text extends line after line over the pages with no interval or break, except the *τέλος τοῦ στοιχείου* and *ἀρχὴ τοῦ στοιχείου* of each letter, it brings home to a modern reader how much more perfect is the apparatus of learning in our day. We are sometimes told that so much is known now that there is no longer time to read books through and that men cannot seek knowledge in more than one direction. A comparison of this Suidas with a modern lexicon would rather suggest that where the means of acquiring it have become so much easier there must be time to learn more than in the days of our founder.

Sir William Paddy, who was well known to Harvey, was a benefactor of St. John's College, Oxford, as well as of this College, where he was President in 1609, 1610, 1611, and 1618. He is addressed by Thorius in words equally applicable to our present president :—

> "Tu qui censu decoratus Equestri
> Virtutem titulis, titulos virtutibus ornas."

He was physician to Laud. "Few excellent men," says Clarendon of the Archbishop, "have ever had fewer friends to their persons," but Paddy was one of the few and a very faithful one. He left his library to St. John's, a fine collection of the scientific books of his time. Chancing to visit that library I asked if there was a separate list of his books and whether they could be pointed out in the cases. Receiving a negative reply to both questions, I asked for Gilbert de Magnete, thinking that Paddy would be sure to have a copy of that great work, of which the author, one of our benefactors, was President here in 1600 when Paddy was Censor. A fine copy was produced and on the first leaf was written "Liber Gulielmi Paddy." This clue made it easy to find several others of his books, Turner's New Herbal of 1551, Gerard's Herbal of 1597, Rondeletius and Guido, Fallopius and Laurentius, and that rare work of our Fellow, Edward Wotton, "De Differentibus Animalium," dedicated to Edward VI. and published in 1552, one of the first printed books on zoology by an Englishman. These required seeking on the shelves, but one book which belonged to Paddy is well known to every visitor to the library for it is displayed in a table case. It is a Royal copy of the 1615 edition of the Book of Common Prayer and contains in Paddy's hand an account of the last hours of King James I. As our late librarian, Dr. Munk, to whose Roll the fame of the College in the world of letters owes a good deal and who wrote a paper on the death of the King, was unacquainted with Paddy's record, it is, perhaps, known to few Fellows of the College, and deserves to be read here as a memorial of our former President and benefactor.

> "Being sent for to Thibautte but two daies before the death of my covraigne Lord and master King James, I held it my Christian dutie to prepare him telling him that ther was nothing left for me to doe (in the afternoone before his death the next daie at noone) butt to pray for his soule. Whereupon the archbyshop and the Lord Keeper, Bishop of Lincolne demanded iff his majestie would be pleased that they sholde praye with hym. Whereunto he cheerfullie accorded and after short praier these sentences were by the byshop of Lincolne distinctlie pronounced unto hym who with his eies the gates of his hart lifted up unto heaven att the end of every sentence gave to us all thereby, a godly assurance of those Graces and livelie faith whereunto he apprehended the Merit of our Lord and onlie Saviour Christ Jesus accordinglie as in his godlie life he had often publiquelie professed."
>
> "WILL PADDY.

The 41 sentences which Bishop Williams recited to the King are written down, ending with the last verse of the Te Deum :

> "In te Domine speravi non confundar in æternum."

Sir William Paddy died in 1634. In that year another benefactor was President and continued so for seven years—Simeon Fox, educated at Eton and at King's College, Cambridge. He was present in the Great Hall at Padua on Thursday, April 25th, 1602, when Harvey took his degree, and he saw him receive the insignia and ornaments of the doctorate, when the books were given to him first shut and then open, a golden ring placed upon his finger, the doctoral cap put upon his head, and finally the kiss of peace given to him with the blessing of authority. The name of Simeon Fox and those of Anthony Fortescue, Richard Willeby, Matthew Lister, Peter Munsel, and Robert Darcey, Englishmen, are recorded with others in the finely decorated diploma as witnesses to the ceremony. The only extant work of Fox is a Latin poem of 29 lines addressed to Winterton. He lived in the house which formed part of the College in Amen Corner and is buried in St. Paul's Cathedral. The bust erected in his honour in the College was unfortunately calcined in the Great Fire of London.

It would be easy if we had but time to-day to find something interesting to tell of each one of our benefactors. I should like to commemorate Assuerus Regemoster, Glisson's fellow-worker, by taking the College to the famous private school in Goldsmith's Rents, off Red Cross-street, where he was educated by Thomas Farnaby, that industrious editor of Juvenal, and Seneca, and Martial Lucan, Ovid, Terence, and Virgil, who had sailed with Sir Francis Drake, and whose learning was respected by Ben Jonson.

How delightful to accompany Dr. Edward Browne, son of Sir Thomas Browne and our President in 1704, in his travels to Larissa, where he hoped to breathe the atmosphere in which Hippocrates had practised and to know a little more of the Father of Medicine by contemplating the features of the country in which he had verified or established those aphorisms of medicine, the first of which is to this day placed before each individual Fellow at every meeting of our College. We might hear Alexander Rhead lecturing to the surgeons and barbers in Monkwell-street at their hall—good artists, as they called themselves, sound practitioners as we should say, differing from their professional descendants of to-day in the fact that instead of thinking, as I find most of my surgical colleagues do, that nearly all diseases, whether internal or external, are curable by the knife, they were inclined to administer medicines with which they were imperfectly acquainted and which the law forbade them to use.

If we cannot forget the words of Hippocrates and the sceptre of Dr. Caius which are exhibited to us at every meeting, surely we must also remember Dr. John Lawson of Queen's College, Cambridge, our President in 1694, who gave us the handsome mace which is borne before the President.

We are quaintly reminded on the *postridie palmarum* of the devotion to our College of Dr. Baldwin Hamey, one of our largest benefactors, when we each receive from his estate half-a-crown. No one has ever surpassed him in his love for the College and admiration of Harvey whom he knew in the College for more than 20 years. In 1625 he went to Hastings on his way to Holland. He had supper with the mayor who dreamed afterwards that Hamey should be detained, and set a guard at his inn. He was thus unable to join the vessel when she sailed; a sudden storm within an hour caused the ship to founder with all on board, and thus the mayor's suspicions, which, perhaps, arose from the learned character of Hamey's talk at his table, saved his life. He was a loyal man and gave the King a valuable ring at the Restoration which he had bought at the sale of King Charles I.'s effects, and in justification of his occasional attendance at the sermons of the Commonwealth men it is mentioned that he used to read an Aldine Virgil bound in vellum or a little Aristophanes bound in red all the time.

Charles Goodall, President from 1708 to 1712, was another man devoted to the College and a zealous defender of its privileges. We who have known the labours and the fidelity of Sir Henry Pitman and Dr. Edward Liveing in the College of our time can have no difficulty in the grateful remembrance of a similar man in the past. He was a friend of

[12] Henry Lyte, a New Herbal London, 1619.

Sydenham who admired both his character and his skill and dedicated his "Schedula Monitoria" to him.

Sir Hans Sloane, our President from 1719 to 1735, was thought worthy to succeed Sir Isaac Newton in 1727 as President of the Royal Society. The μεγαλοπρέπεια of Aristotle, the generous splendour suitable to a great man, was displayed by him through a long life, and the institution of the British Museum was due to the discerning liberality with which he disposed of his vast and valuable collections at his death. Hans-place and Sloane-street appropriately preserve his memory on the estate which he had purchased and where he lived during 13 years of an intelligent old age.

Two recent benefactors must not be omitted. Sir Hermann Weber who founded in 1895 a handsome prize in memory of Dr. E. A. Parkes, and Captain Edward Wilmot Williams who founded a gold medal in memory of Dr. Francis Bisset Hawkins, his kinsman, long the senior Fellow of this College.

We are assembled in our library and must not forget those who have enriched it. To men who regard the world of books as a region only second to the world of men in its interest ours is a delightful collection. It is in great part composed of the successive gifts of men who have loved their books, and represents the reading of 12 generations of well-read physicians. Linacre our founder, and Dr. Holsbosch, and Gilbert, the discover of the magnetism of the earth, and the Marquis of Dorchester, friend of Harvey and of Scarborough, and Sir Theodore Mayerne, physician to Henry IV. of France and to James I., Charles I., and Charles II., a man of extraordinary learning and ability: these were some of the earlier benefactors. After them comes Dr. Richard Hale, whose portrait justly occupies a prominent place here. He was of Trinity College, Oxford, and though an enlightened and well-informed physician of his own time took pleasure in mediæval treatises, enjoyed the Flos medicinae of the School of Salernum, and walked with pleasure in the garden in which that flower grows beside the Rosa Anglica and the Rosa Gallica, perhaps murmuring as he went:

"Cur moriatur homo cui salvia crescit in horto?
Contra vim mortis: non est medicamen in hortis."

Later still comes Richard Brocklesby, a schoolfellow of Burke and his friend throughout life. He was a generous giver: to Burke, to Johnson, to his nephew Thomas Young, one of our Fellows, the exponent of hieroglyphics, the originator of the undulatory theory of light, to our library, and I am sure in many other directions no longer remembered.

"What I spent I had,
What I kept I lost,
What I gave I have,"

says the old epitaph. Brocklesby understood its meaning. Johnson himself gave us a book and we owe a debt of gratitude to one other of that great literary circle, for Sir Joshua Reynolds went to much trouble for us as to the cleaning of our pictures. In later days Sir Andrew Clark gave a handsome bookcase filled with books, and Dr. Pye-Smith a fine solid case for the display of some of the treasures of our library. Our present librarian, Dr. Payne, has given several rarities from his own fine library to ours.

There have been endowed in the College at different times five lectureships. The oldest was founded in 1581 by Dr. Richard Caldwall and John, Lord Lumley. Caldwall, an Oxonian, was President in 1570. Only one of his writings has survived, a translation of the Tables of Surgerie of Horatius Morus of Florence, and his ornate tomb, described by Camden, perished with the church of St. Benet's, Paul's Wharf, in the Great Fire of London, so that the lectureship is the chief memorial of his learning and virtues. John, Lord Lumley, was not unworthy to be his associate. He was of Queen's College, Cambridge, and had a noble library, parts of which are preserved in the British Museum, in the Bodleian and in the Public Library at Cambridge; and he wrote a translation of the Institution of a Christian Prince of Erasmus. The conversation in Lumley Castle must have been interesting, for its lord besides his knowledge of books had taken a part in many affairs of State and his wife, daughter of the twelfth Earl of Arundel was as learned as her lord. She translated the Iphegenia of Euripides and some orations of Isocrates into English and one oration into Latin. The founder of our lectureship died in 1609 and was buried in the aisle which he added in 1592 to the church of St. Dunstan at Cheam.[12] The inscription traces on his tomb his descent from the times of King Edward the Confessor, and in its marble ornament with 19 surrounding shields of arms showed how fully he, whose father was attainted and executed at Tyburn, had restored the ancient wealth and honours of his family.

The next lectureship is that founded in 1632 by Dr. Theodore Goulston, a Fellow of this College, who was educated at Merton College, Oxford. He was a person of much learning and translated into Latin with commentaries two books of Aristotle and several of the Opuscula of Galen. He lived in the same parish as Harvey, that of St. Martin-by-Ludgate, and as he was Censor in the year in which Harvey was appointed Lumleian lecturer, while they were Censors together in a later year, knew him well. The rector of their parish was Samuel Purchas, editor of "Hackluytus Redivivus or Purchas his Pilgrims," and it is easy to imagine that this Johnian who had been at Cambridge during Harvey's time there, was now and then admitted to the society of Goulston and Harvey and perhaps amused them with tales from the records of voyages of which he possessed the manuscripts. Goulston's "Opuscula Varia" of Galen was published by his friend Thomas Gataker in 1640, after the editor's death. Harvey possessed a handsomely bound copy, now in the British Museum, in which he has written many notes, especially on the Exhortatio ad Medicinam et Artes, the De Sectis ad Tyrones, the De Cognoscendis et Corrigendis Animi Perturbationibus, and the other two treatises on the mind.

A third lectureship was planned by Dr. William Croune, a Fellow of the College, in 1684, and was formally established by his widow in 1706. He had been a Fellow of Emmanuel College, Cambridge, and became professor of rhetoric at Gresham College and read several papers before the Royal Society, of which he was one of the earliest Fellows.

No further lectureship was founded till 1880 when the widow of Dr. William Wood Bradshaw, a Member of the College, founded an annual lecture in memory of her husband.

In 1886 Dr. Gavin Milroy, a Fellow of the College, founded a lectureship in State Medicine and Public Hygiene.

These five lectureships are devoted to clinical medicine, pathology, anatomy, physiology, and public health, but neither here nor in any of our universities are there public lectures on the history of medicine. The history of medicine may, perhaps, be divided into three parts. One belongs to the general study of philosophy, the exposition of the theories and the arguments to support them which have been used in past ages. This is chiefly of interest in relation to the study of the human mind. A second part treats of the lives and the work of physicians of past times. This cannot but instruct us who have the same difficulties and the same objects. The third is the study of the cases and epidemics of past times as they appear not only in medical writers but in general history. This is, perhaps, the most useful of all. In the mistaken interpretation of accurately recorded phenomena in old times we have before us a picture of our own errors in the interpretation of what we discover at the bedside and a warning against too great deference to prevalent systems of treatment. To learn anything from the history of medicine in any of these branches it is first necessary to know medicine, and the only valuable writers on the subject have been well-informed physicians like Dr. John Freind, whose history of physic is the most considerable work on the subject in our language, or Dr. Payne, whose devotion to pathology and to clinical medicine is as well known as his lucid exposition of the learning of past centuries. It is fortunate that the opportunity has occurred of establishing such lectures.

The wife of a very learned man desires to perpetuate his memory in a way grateful to him by the foundation in this College of a lectureship on the history of medicine. He was a Member of the College and she wishes that the benefaction shall be considered to come from him and be called after him as in the case of Dr. Croune, whose wishes as to a lectureship were carried out by his widow, Lady Sadleir. No occasion seems more appropriate than this to mention to the College this gift of a sum of £2000 to be invested in the usual way for this purpose on conditions similar to those of our ancient lectureships, which must, of course, be formally laid before our Comitia, and will, I do not doubt, be accepted there, since when I lately mentioned them by letter to the Comitia Minora I was informed that the President and Censors, though without formal authority in such a case, were prepared to recommend the College to accept the gift.

[12] Now detached from the church.

Dr. Thomas Fitz-Patrick, who must hereafter be mentioned as one of our benefactors, was born in 1832 at Virginia, a little country town standing at the end of a long lake in Cavan. Although one of the least wealthy parts of Ireland the surrounding district is one of literary fame. In the boyhood of our benefactor the epigrams and other poems of Philip MacBradaigh, and his touching lines on his daughter's affection, were known to everyone, as well as those of his kinsman Fiachra MacBradaigh, a country schoolmaster of ready wit who flourished in the reigns of George I. and George II. The itinerant fiddlers and pipers who had taken the place of the harpers of more remote times all knew the songs of Cathair MacCaba, who died in 1740 and was a harper as well as a poet and a friend of O'Carolan, the most famous of all Irish musical composers, who addressed to him a pleasant poem—"Rath do cheirde fein ort" (here is the reward of your own art). The ancient churchyard of Moybologue in which MacCaba is buried contains also the mortal remains of Brian O'Clery, a somewhat later poet of the same century, descended from a famous race of hereditary historians whose chronicles are one of the chief sources of information about mediæval Ireland. His poem on spring and others of his verses were often recited and his early death lamented. John O'Neachtan's poems on the death of Mary of Modena, Queen of James II., and on the Duke of Berwick, and many other compositions of his, circulated in this district. John O'Farrelly of Mullagh, a village about four miles from Fitz-Patrick's birthplace, where he first practised his profession, wrote the history of the district under the title of "Seanchas an da Bhreifhne." A romance by Brian O'Reilly, entitled "Eachtra Mheic na Mhiochomhairle" (the adventures of the son of evil counsel), was read or repeated by great turf fires in many farm-houses on winter nights, though such in Fitz-Patrick's youth was the poverty of the district that even rushlights were rare and a splinter of bog fir or twigs of dry furze thrown into the fire supplied the light by which all these writings were read from manuscripts. It is right to mention these authors and their works—obscure elsewhere but long well known in that part of Cavan—in order to show how much love of literature there was, and I agree with that great scholar, the late Mr. Henry Bradshaw, in respecting the ill-remunerated scribes who copied these works in manuscript and the authors who composed them without hope of other reward than local fame. Nor were the literary associations all in the native language, for Henry Brook, author of "The Fool of Quality," a novel once widely read, lived at Corfada, between Virginia and Mullagh, as did his accomplished daughter, Miss Charlotte Brook, whose "Reliques of Irish Poetry" is a handsome quarto to be seen in most good eighteenth-century libraries. Close to Virginia is Quilca, the home of Dr. Thomas Sheridan, the editor of "Perseus," where Swift was a frequent guest, and many stories of the famous Dean of St. Patrick's were current in the neighbourhood in Fitz-Patrick's youth and later. In the next field to the fragment of wall which is at the present day all that is left of the house of Henry Brook a small but ancient cairn near a disused well marks the birthplace of a learned person of very ancient times—St. Cilian of Würzburg, in the seventh century the apostle of Franconia. The varied literary associations of his native district had no doubt a great effect in giving Fitz-Patrick a taste for literature of all kinds. He graduated at Trinity College, Dublin, where he obtained several prizes, and became a Member of this College in 1868. He was a man imbued with learning, well read in Homer and in Lucretius, and knowing Spanish, Italian, and French, and German, as well as something of Hebrew, of modern Greek, and of Danish. His knowledge of English literature was extensive and his taste good. He had travelled as well as read and having thus accumulated all the materials for conversation he was a delightful companion. His intellectual attainments were the ornaments of solid virtues and he deserves to be remembered with honour in this honourable place.

I could mention many more worthy benefactors and, as in private duty bound, you, Sir, and the Fellows would sit on till I had ended their praises, but I must remember that we have guests who may exclaim with Macbeth:—

> "What! will the line stretch out till the crack of doom?"

So, like an old charter, I will end my list with the words "cum multis aliis." We are grateful to them all and will always maintain their fame.

As to the last parts of Harvey's exhortation how can they be better carried out than by considering the examples of the investigation of nature and the maintenance of friendship which the College itself affords. Harvey himself first of all, beloved in his time, untiring in his observations, considering them and stating their results in every aspect during all the years from 1616 to 1628, and ending in the certainty that the blood in the animal body is impelled in a circle and is in a state of ceaseless movement—that this is the action which the heart performs by means of its pulse and that this is the sole end of the contraction of the heart. Think how the pulse had been studied before, in the 13 books of Galen, by Rufus of Ephesus, by Philaretus, and by many more, yet never understood because an hypothesis resting on too small a basis of observation prevented men from seeking out the truth of nature by way of experiment. Then Francis Glisson labouring for five years and more at the observation of a disease undescribed before and ending with a perfect pathological and clinical treatise on Rickets, the first of its kind to appear in England. And Heberden, whose commentaries, though they contain no single great discovery, yet are so original in every line that they are a continued discovery of all that may be seen at the bedside. Sir George Baker, working out the causes and the results of lead-poisoning in the cider country and leaving no step unassured on the way. Sir William Jenner laboriously working at the bedside and in the post-mortem room and by the method which Harvey urged, "αὐτοψία non mentis agitatio," demonstrating the true character of enteric fever and its distinction from the typhus fever with which it had so long been confounded.

Many of my predecessors have dwelt at length on the discoveries of Harvey himself. I should like to have done so, too, had I not felt bound to follow his own injunctions and to commemorate our benefactors, a task perhaps easier to perform, for it requires great talents to frame a composition worthy of his fame and to be so great a master of words as to utter praises equal to his merits who left us so great a discovery won by his own genius. The lines of Lucretius on Epicurus may justly be used to praise Harvey:—

> "Quis potis est dignum pollente pectore carmen
> Condere pro rerum majestate hisque refertis?
> Quisve valet verbis tantum qui fingere laudes
> Pro meritis ejus possit qui talia nobis
> Pectore parta suo quaesitaque praemia liquit."

An Address
ON
EXAMINATIONS AND THE EDUCATION OF THE SPECIAL SENSES.

Delivered at the Queen's Hospital, Birmingham, on Oct. 18th, 1901, on the First Distribution of Clinical Prizes since the University commenced its work,

BY THOMAS BRYANT, M.CH., F.R.C.S. ENG.
AND IREL.,
SURGEON-IN-ORDINARY TO THE KING; CONSULTING SURGEON TO GUY'S HOSPITAL; PAST PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND, ETC.

MR. PRESIDENT AND GENTLEMEN,—You have but recently enjoyed the first Congregation of your ideal university and had the benefit of learning from your distinguished Principal the history of its birth. You have likewise had the benefit of hearing from your no less distinguished Chancellor and Father of the University the clear enunciation of the principles upon which the institution has been founded, with an eloquent expression from his parental lips of the brilliant career which it is anticipated the university will run in the coming ages.

As an interested worker and dweller in a city older than Birmingham, which is now seriously and strenuously occupied in working out the problem of turning a mere examining university into a teaching one for a population many times larger than your own, I have studied all your proceedings, and as the President of your Clinical Board has been so kind as to ask me to distribute the clinical prizes to the students at this hospital on this the first occasion since

Birmingham received a charter for its university I may be pardoned for making a few remarks upon your ideals and hopes of future developments.

First of all I must congratulate you upon having adopted in your modern institution the high ideals of the venerable universities of this country of which we all are so proud. It was a wise decision for you to have taken, for to build upon such a solid basis your foundations must be firm, and by so doing opposition will certainly be disarmed against your efforts "to strike out some new path of distinction which will be not unworthy of their companionship." For the founders of your University have clearly been alive to the fact that different stages of human progress call for changes in new as well as in old institutions, so as to adapt them to the requirements of the times in which they live.

To lay down in the first place the principle that in such an ideal institution as this "all existing knowledge is to be taught" was absolutely correct, in spite of the probability that in carrying it out great demands may be made upon your resources, although you have good reasons to anticipate a realisation of your ideal, based upon past experience and the unprecedented success which has attended the foundation of your University.

The second feature of your ideal university—"that it is a place where the knowledge which has been acquired has to be tested"—is as sound as the first, although in carrying out the principle much discretion with care is needed, for whilst all will admit that too many examinations encourage cramming and discourage individual effort, such examinations as are given should always be searching. Periodical class-testing by teachers may be wise and necessary in order to mark progress, but all examinations, and particularly oral examinations, for degrees and honours should be undertaken by outside professors of experience in the presence, and with the assistance, of the university teachers. As an examiner of some experience and as a visitor of examinations conducted upon methods widely differing I have no hesitation in expressing my conviction that whilst with every method of conducting examinations wrong decisions will occasionally be given, the chances of giving them are unquestionably far fewer by the method I am now advocating than they have been where the examinations have been entirely conducted by the teachers themselves. By any and every method of examination good or well-prepared men and badly-prepared men can be recognised with equal facility, whereas with the intermediate and largest class, which includes the indifferently-prepared student, the difficulty of decision is always great. With such a class it may be true, as I have heard it stated, that the greater popularity of the teaching examiner over the outside examiner is not open to a question, and as a visitor of examinations I can well understand why such a consensus of opinion should exist, for I could, if I deemed it prudent, afford you much food for thought and some amusement by recording incidents illustrative of such methods as might seem to explain the student's view. But, seriously, is it a true subject of congratulation for an indifferently-prepared student to have just scraped through his examination? and is such a success a true subject of congratulation from a university point of view? From both points of view I unhesitatingly answer that it is not, and in saying this I have from the university standpoint the support of your Chancellor when he stated: "I conceive that common prudence should teach us to keep up the value of the degrees which we have begun to confer to-day, and nothing would be more unwise, more fatal to our reputation and to our ultimate success, than that we should endeavour to multiply the number of our students at the expense of their quality." From a student's point of view the same conclusion has to be drawn—at any rate, from the point of view of the medical student—for is it not true that many an indifferent student has developed into a good one by some throw-back for six months upon extra study? And that which was at the time looked upon as a calamity not only gave an impulse to efforts that had been half-hearted or torpid, but had helped to develop a character of a higher order and had rendered a successful career in life more certain. For my own part, when, as an examiner, a student whom I knew to be a good one was rejected in a pass examination my sympathies were more with his parents than with the pupil himself, who, in spite of his throw-back with its disappointments, had been given one more chance of taking advantage of his opportunities of gaining knowledge and experience in medical matters in his medical school which he was not likely to have again, for experience has certainly proved to me that from a student point of view a temporary rejection is not always a matter to be lamented, since by it many a feeble man has been made strong and powers have been developed in him which have proved to be of lasting value.

With respect to the third feature of your University I can give nothing less than my warmest congratulations; for to start the University and to maintain it "as a place where knowledge is to be increased and where the limits of learning are to be extended" is a noble ambition; and when this object is to be sought by uniting the students with their teachers in the work of fresh and new investigation your aims are almost those of perfection, and if eventually they are but imperfectly realised they must prove a success.

Lastly, we are told that your university is to be a place where the application of knowledge must be indicated and directed and that theory and practice are to be combined with due regard to the needs of your own time and of your own district, and that to carry out these wisely-conceived and well-considered objects you look with confidence to the help of your fellow-citizens. That you will not look in vain for this assistance is my firm belief and hope, and if you as the medical faculty of this enlightened University can but secure, in the words of your Chancellor, "the establishment of a great school of medical research which could carry forward and apply the discoveries of the last few years—discoveries which indicate to us, at any rate, the direction in which we are to seek for the weapons wherewith to combat suffering and misery and disease," you will, indeed, excite the envy of all rival institutions, for if theology is what it is said to be by the Bishop of Calcutta, "the queen of the sciences, because of the power of her facts as applied to human life and its needs," surely the profession you have adopted must claim to be the king, since it is the one art and science which is utilised for the special benefit of mankind and which culls from every branch of human industry and knowledge anything and everything which can possibly have a beneficial influence upon the prevention, relief, or cure of human suffering or disease. Under such circumstances, how wise it is that this faculty of medicine should be part and parcel of a university which is based upon the four leading principles upon which I have commented and where all knowledge is taught, tested, increased, and applied.

There is, however, one important branch of education which your teachers, however skilled, can do no more than encourage and which consequently must be left practically in your own hands. It can neither be imparted by lectures nor acquired by reading "through the spectacles of books," and yet it is without a doubt the chief accomplishment upon which your success in this university and later in the practice of your profession will unquestionably depend. I allude to your individual power of intelligent observation, through which your personal experience must be acquired, as secured by the education of your special senses of sight, hearing, and touch with your powers of reflection upon the facts which your senses have supplied you. I should add that if a student cannot be taught this he can be educated to acquire it by those responsible for his education.

How the senses are to be educated is a personal matter; if they have been partially trained or disciplined in early life by the study of some branch of natural history after the manner of John Hunter, or in one of our public schools where science is recognised, as may have been the lot of a few of you, you will under either of these circumstances have gained an advantage of great value over your fellow-pupils who have been less fortunately placed, for such will soon have discovered how difficult it is, even in early manhood, to make up for the deficiency of their primary education; and yet it has to be done; for as medical students you will have found out that to gain any success worth having a degree of keenness and adaptability of sight, hearing, and touch is absolutely essential, and that to acquire eminence such keenness must not only be of a high order but it must be associated with an intelligent appreciation of the fact observed. To attain the degree of intelligent observation which is so essential for the practitioner of medicine may be a task of difficulty. Some students never acquire it. Those who do so in a high degree are amongst the best, but there must be many degrees of efficiency, and I want to help you in the solution of this problem out of the somewhat extensive opportunities I have enjoyed of teaching, testing, and investigating, and in so doing I must ask my younger hearers to put into practice what I may suggest and your younger

teachers by testing your capabilities to help you in your efforts. To my senior hearers I venture to apologise for having taken upon myself under present circumstances the rôle of a teacher and to ask them to explain my action by the confidence I have in the value of the recommendations I am about to bring before you. In your hands, however, I feel sure of support, for your experience will certainly justify the action I am now taking.

As scholastic conditions exist at present the education of the senses has in school life, unfortunately, been left to chance, and no special means have been introduced into school routine for their education. In university life the introduction of some branch of natural science as a preliminary subject of study has been an educational advance of great importance, not only as an introduction to the knowledge of Nature's works, but as a means of demonstrating the value of modes of investigation which are applicable to every branch of human research. Under all circumstances, however, the education of the special senses should be a leading object of all teachers, and the best way of carrying out this purpose in medical education is by testing the student's capabilities. The bulk of the work, it is true, must be left to the students themselves, but still they can be encouraged, and by being so will surely be materially helped. A medical student may watch with every care an able teacher in his endeavour to unravel the intricacies of a complicated case of disease, but he will not gain much by his obsevation, for he cannot see, hear, or feel with his teacher's senses, but can only do so with his own; and when he has advanced far enough to consider the meaning of a diagnosis he will have discovered that a reliable one can only be the outcome of a correct observation of the facts of the case as brought out by his own observation and the conclusion of sound reasoning upon the facts themselves.

How, then, it may be reasonably asked, is a student to learn how to make the best use of his senses for medical purposes? There is but one answer, and that is by steady and prolonged practice—and this practice must be established on a method. Let the student, as a rule of life and as a matter of routine, habitually begin his investigation of every case by looking well at his patient *as a whole* and subsequently in detail, and as he progresses in the powers of observation he will be astonished and pleased to have discovered how much may be learnt by a look and how valuable the intelligent look has been. In local injuries and diseases let him follow an equally valuable routine practice and as a matter of habit invariably compare the injured with the corresponding uninjured part, and having noted the facts observed with the points of difference in the two sides of the body let him reflect and reason upon the value of the facts—indeed, upon the value of each fact. By such a routine practice a provisional diagnosis may have been reached which has either to be supported or refuted by subsequent inquiries into the history of the case and any other facts which may have been elicited by manipulation and the sense of touch. In all cases let sight lead the way and touch follow, reflection governing the whole. In a large number of cases it will be found that the objective facts elicited by sight are alone enough to suggest a diagnosis, which has only to be supported by the points afforded by the history of the case and the facts brought out by manipulation and palpation. In local injuries or diseases a student is too apt to commence his examination of a case by manual methods, much to the detriment of his patient and his own discomfiture; this natural but inefficient routine ought not to be allowed, for as a rule a good inspection of the injured or diseased part and its comparison with the sound side will supply suggestions as to the nature of the case which will only require the gentlest manipulation of the surgeon to confirm, the diagnosis of the case being based upon the facts seen and felt, the history of the case, and the exercise of thought upon the facts. Examiners will greatly help the establishment of this habit of investigation by asking pupils primarily to look at a case and to describe what they see before they are allowed to use their hands. I would suggest, in order to assist self-help in the education of sight, that house surgeons, fellow-dressers, and clinical clerks examine each other in any given case as to what they see; and argue out the probabilities of the nature of the case upon the points observed, and having done so to proceed to their investigation of the affected part by manipulation or other necessary methods. I would likewise ask the junior teachers of the schools or university to encourage such efforts, for as an old teacher I can speak strongly in favour of them as well as of their efficiency. Indeed, by acting upon this suggestion fresh pleasures will be added to study, for students readily recognise the value of the method of approaching a case in the way I am advocating and find a pleasure in the recognition of the existence of a power of observation which had been dormant and which yields pleasure and profit by its cultivation. As an examiner I can likewise give strong testimony to the importance of this method of testing knowledge, for at the Royal College of Surgeons of England, where I commonly employed it, it was most instructive, and I can recall the interest which my old friend and fellow examiner the late Sir George Humphry took in the proceeding and how in his enthusiasm he subsequently took it to Cambridge and embodied the value of the method in his well-recognised precept, "Eyes first, hands next, and tongue last." I may add that it was in the differential diagnosis of a scrotal swelling that I first realised the full value of the method I am inculcating, when I, indeed, demonstrated that a student could by the eye alone, by this process of elimination, reach a provisional diagnosis of the case before him, which had only to be confirmed or confuted by manipulative methods, a history of the case, and the exercise of reason.

To dwell upon the value of the sense of touch is surely unnecessary; the *tactus eruditus* of the skilled surgeon is always a wonder to the uninitiated and is only to be acquired by much practice. In learning it I would impress upon the student that it can be educated as quickly by gentle manipulation as by the reverse, and that anything like roughness should always be avoided. To appreciate the significance of feeling the pulse is likewise the product of great practice and much thought. To estimate the presence or absence of tenderness in any part, and particularly in the abdomen, is always difficult, but in all circumstances gentle pressure is more likely to elicit the required information than severe pressure. In my own practice I have found a method of examining a sensitive patient upon this point of such great value as to induce me to describe it to you. I simply place my hand upon the part involved and tell the patient to press upon it with his or her hands until pain is produced; by so doing I can do no harm but learn much, and I am often startled by the greater amount of pressure a patient will by this method endure than I should have ventured to have employed.

With these suggestions to help you in your clinical work I must bring my remarks to a close. I have appreciated very highly the compliment you have paid me by inviting me to give away the prizes upon this the conclusion of the first academic year of the medical school of your new university; I recognise to the full the sound and liberal principles upon which your university has been founded, and congratulate you, your townsmen, and particularly your Chancellor, upon the energy and triumphant skill with which its establishment has been accomplished. I can now only wish you all God-speed in your work. It was from such feelings that I have been led to give you the few practical hints which the active work of a fairly long life has enabled me to formulate, to help you in the difficult task of educating your special senses, upon the successful use of which your future success in life must materially depend; they may to some of you seem trivial and unworthy of a great occasion, to others they may appear worthy of a trial, to a few they may seem sound. They form, at any rate, the first attempt to supply a great want and to educate systematically the special senses of medical students by methods which have been proved of value in general clinical work, for they have been tested somewhat extensively both in teaching and examining and are as valuable to examiners and teachers as to students. If I were a Rip van Winkle and could revisit this infant university 100 years hence I should probably find that these suggestions of mine, having done some good, had been incorporated into general teaching methods, and that as natural science had become part of general education the special senses of all students would have been cultivated far more efficiently than they can be said to be at the present time. I should certainly find this University possessing a history as proud as any of its present compeers, and with future prospects bright enough to satisfy the minds of the most hopeful of its present founders. What Birmingham itself would have become by "the application of the highest science to its commonest industries and manufactories" I will not venture to predict, for the mind can now hardly realise the possibilities which open out from such a point of view. As to medical science, the applied science of all the arts and

sciences for the benefit of man, such would certainly be still in existence, but how can we picture its position? for by preventive medicine, the use of antitoxins, and the influence of friendly bacteria many of the diseases which at the present day are most destructive will probably have been cleared away, the art of living have become more perfect, and the art of curing not have taken a back place. Life and death will, however, still be present, and men and women with the same natures as now exist, although under altered and possibly improved conditions. New diseases, or old ones so modified as to seem new, may have come into existence as moulded by the altered circumstances of life and encouraged if not brought about by the use of peptones, pharmaceutical fancies, self-drugging, and refinements of daily life. Hope of higher things would not have departed, for Birmingham University, with others like it, would still be in existence and be doing their beneficent work to make life more useful, more profitable, and therefore happier.

I thank you, gentlemen, for your attention and in the words of your Chancellor close these remarks with "*Floreat universitas nostra.*"

ABSTRACT OF

Presidential Address

ON

THE DECLINE IN THE ART OF PRESCRIBING.

Delivered before the St. Mary's Hospital Medical Society on Oct. 16th, 1901,

BY ARTHUR P. LUFF, M.D., B.Sc., F.R.C.P. LOND.,

PHYSICIAN IN CHARGE OF OUT-PATIENTS AND LECTURER ON FORENSIC MEDICINE IN ST. MARY'S HOSPITAL.

GENTLEMEN,—The subject that I have selected for my address to you this evening is the decline in the art of prescribing. It is a subject which has given me cause for much painful reflection for several years, and it is one which, in my opinion, affects very closely the welfare of the public as well as the usefulness and dignity of the medical profession. I think there cannot be the slightest doubt but that the art of prescribing—that is, of ordering suitable remedies in suitable forms for the treatment of morbid conditions—is declining, and that this very important function of the medical man is being replaced by what I consider to be the slovenly and enervating habit of writing an order for some proprietary preparation or for some compressed form of drug, and then dignifying such an order with the title of a prescription. There is, I think, a tendency at the present time in this era of brilliant discoveries in medicine, pathology, and bacteriology, and in this age of splendid advances in surgery, to neglect the treatment of common and of minor ailments by drugs. Let me, however, impress upon you that in the treatment of such ailments lies the principal part of your work as medical practitioners, and that the gauge by which your success in practice will be mainly measured, and the esteem in which to a great extent you will be held by your patients, will depend upon the success you attain in the treatment and cure of what may superficially appear to be but trifling ailments, but which, none the less, as departures from ordinary health are naturally considered by the individual sufferers as important, and therefore as deserving the careful attention and the skilled therapeutic resources of the medical man.

In my opinion the main reasons for the present decadence in the art of prescribing are the altogether inadequate attention which is given to the teaching of the subject by the majority of the members of the staffs of the various teaching hospitals, and the scanty test applied by so many of the examining bodies as to the possession of a knowledge of rational prescribing on the part of candidates presenting themselves for the final examinations. The want of attention which is given to the teaching of the subject in our large hospitals is certainly, as far as the out-patient department practice is concerned, in some measure due to the over-pressure of work consequent on the number of patients that have to be seen and treated in a given time—an over-pressure which necessitates, to some extent, the ordering of medicines already prepared according to some formula in the hospital pharmacopœia. The prescribing of these ready-made medicines undoubtedly saves the time of the physician or surgeon and of the dispenser, but, unfortunately, the outcome of the custom of ordering ready-made mixtures, &c., is that the students soon fall into the habit and carry it with them into private practice. Consequently they have no opportunity of acquiring confidence in their own powers to write a useful prescription and so fall a ready prey to the temptations offered them by manufacturers to prescribe some ready-made proprietary medicine or some form of a compressed drug. It has been stated that the hospital practice of ordering mixtures, pills, &c., by the titles under which they appear in the hospital pharmacopœia is not detrimental to the acquisition of a knowledge of correct prescribing, since the student can always refer to the pharmacopœia for information as to the composition and strength of the medicine ordered. I, however, strongly maintain that the information so obtained is in no sense comparable to the educational advantages of hearing the dictation of a prescription in full. There is no better method of acquiring a knowledge of correct dosage, and of the avoidance of incompatible ingredients, than by hearing the physician or surgeon dictate his prescription, comment on the dosage of the ingredients, and give his reasons for the employment of such ingredients. On the other hand, if it is left to the student to look up the composition of a medicine from the hospital pharmacopœia he is apt to forget to do so, and certainly he can never in that way either acquire a tithe of the knowledge, or retain the information so well in his memory, as by hearing the dictation of a prescription in full.

What I wish to impress is that in order to learn thoroughly the true art of prescribing it is essential, in the first place, that when you proceed to your hospital work you should give a regular and full attendance to the work in the wards and out-patient departments, and, secondly, that your teachers should recognise the importance of imparting to you a knowledge of correct prescribing for the individual cases before you, and should abandon, to some extent at all events, the set habit of ordering the ready-made medicines. Here I must touch upon what I consider to be a serious obstacle to the adequate attendance on the practical work I am advocating. I refer to the altogether unnecessary amount of time that you are required to give to so-called systematic courses of lectures. It is no uncommon experience for me when engaged in my out-patient room in the practical teaching of the diagnosis and treatment of disease, to see the students at a certain hour trooping away—unwillingly, I trust—to the set lectures which they are compelled to attend in order to be signed up for their examinations. Most cordially do I endorse the hope recently expressed by Dr. P. W. Latham, in his admirable opening address at St. George's Hospital, that the time may not be far distant when systematic lectures on medicine, surgery, pathology, pharmacology, forensic medicine, &c., will be discontinued, and students will thereby be enabled to devote more attention to practical work and demonstrations. As Dr. Latham said, "Formal lectures on these subjects are the inheritance of an ancient system, the relics of a time when books were scarce, but the system lingers on and apparently will die hard." I earnestly desire to see the abolition of certificates of attendance on most lectures and to witness the licensing bodies taking the bold and honourable stand of ascertaining for themselves whether students possess the requisite knowledge, and ceasing to require the guarantee that candidates have sat through a given number of what possibly may be but dreary and uninteresting discourses. In medical training and learning I am a staunch advocate of the principles of free trade.

There is another aspect of the subject of prescribing to which I wish to direct your attention. The practice of writing an order for a particular form of compressed drug or for a proprietary preparation—for I cannot dignify such an act at the writing of a prescription—is apt to encourage patients to recommend such proprietary articles to their immediate friends who, in their opinion, are suffering from similar symptoms or from what they imagine to be a similar complaint. I need scarcely point out to you that what has been ordered as suitable treatment

for A may be remarkably bad for A's friends and may be productive of serious harm to them. Moreover, to look at the matter from another point of view, by giving your patients the opportunity of recommending these proprietary articles to their friends you are simply playing into the hands, and the pockets, of the manufacturers of those preparations, which are so speciously puffed, and with the samples and laudatory advertisements of which we are so profusely deluged. You may, perhaps, say that if you write an orthodox prescription for a medicine the patient is just as likely to recommend that to his friends. As an actual fact my experience is that such is not nearly so likely to occur as when a patient can name a proprietary article which can be readily purchased of any pharmacist or at any drug store. It is, I believe, the ready facility with which powerful drugs prepared in compressed and other forms are obtainable by the public that constitutes a very grave danger—a facility which is responsible to a great extent for the increasing practice of self-drugging, and I am much afraid that this state of affairs has been brought about by these preparations being so indiscriminately and so largely prescribed by medical men. It is simply appalling to witness the habit that has grown up of people keeping in their houses and carrying about in their dressing-cases compressed forms of powerful drugs which they employ to relieve pain either by taking them internally or by hypodermic administration, quite losing sight of the fact that the removal of the cause of the pain is much more important than the removal of the pain itself. Moreover, the temporary relief of pain frequently prevents the sufferer from seeking medical advice until the diseased condition which is the cause of the pain has become thoroughly established, and therefore more difficult to cure. In addition, the facility with which these forms of compressed drugs can be obtained and administered encourages that most evil of habits, the taking of narcotic drugs. Let me strongly advise you never to prescribe drugs of a sedative nature, such as antipyrin, antifebrin, &c., by such names, but by their scientific terms. For instance, order antipyrin as phenazone, antifebrin as acetanilide, and so on. In addition, never order them in compressed forms, but prescribe them to be taken in cachets or as powders. It is frequently my fate in my private consulting-room for patients to present for my inspection and supposed edification the so-called prescriptions of some of the very minor lights of medicine. These documents are frequently mere orders for some proprietary preparation possessing an outlandish name, the composition of which is generally absolutely unknown to the prescriber, whilst for its supposed therapeutic effects he has to depend on the statements of the manufacturer of the article. These orders are to me sad illustrations of the ease with which the writers have departed from the path of therapeutic righteousness—across each one there appears to my mental eye written the word "Ichabod." On the other hand, it has frequently been my privilege to see the prescriptions of one who certainly ranks amongst the greatest and most scientific of physicians that have graced the staff of this hospital, and it is at once apparent that each prescription has been carefully thought out and adjusted to the individual needs of the patient. To me these prescriptions, which are never debased by an order for a proprietary medicine, are grand therapeutic lessons.

In conclusion, gentlemen, let me beg of you to endeavour during your studentship here to cultivate by every means in your power a knowledge of the art of prescribing. Let me entreat you never to become the instruments by which your patients may be tempted to drift into the habit of self-treatment by compressed and other easily administered drugs—a habit which is tending to displace the true therapeutic art and which is tending to divert into the hands of purely commercial men that function which should remain the prerogative and the glory of the medical man.

THE VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.—The next class for the instruction of volunteer medical officers in the subjects of the proficiency examination will be held at 23, Cambridge-street, W., and will commence on Monday, Nov. 4th, at 5 P.M. Officers who wish to join the same should apply to the Senior Medical Officer, Volunteer Ambulance School of Instruction, at the above address

NOTE ON THE RESULTS OBTAINED BY ANTI-TYPHOID INOCULATION IN THE CASE OF AN EPIDEMIC OF TYPHOID FEVER WHICH OCCURRED IN THE RICHMOND ASYLUM, DUBLIN.

BY A. E. WRIGHT, M.D. DUB.,
PROFESSOR OF PATHOLOGY, ARMY MEDICAL SCHOOL, NETLEY.

I AM indebted to Mr. H. M. Cullinan of the Richmond Asylum, Dublin, for a detailed account of the outbreak of typhoid fever which occurred in that asylum in the autumn of last year, and for particulars with regard to the results obtained by anti-typhoid inoculation in connexion with that outbreak. From the materials above referred to I have abstracted the following narrative of events.

Course of the epidemic.—The first case of typhoid fever which occurred in connexion with the epidemic here in question came under observation on August 7th, 1900. From that date onwards to the end of December 54 cases of typhoid fever occurred among the patients and the nursing staff. The chronological distribution of these cases is exhibited in the following tabular statement.

August 7th to Sept. 6th	19 cases.*
Sept. 7th to Oct. 6th	8 cases.†
Oct. 7th to Nov. 6th	8 cases.
Nov. 7th to Dec. 6th	14 cases.‡
Dec. 7th to 24th (half month)	5 cases.§

* Eight of these cases occurred among the nursing staff.
† One of these cases occurred among the nursing staff.
‡ Three of these cases occurred among the nursing staff.
§ All these cases occurred among the nursing staff.

Particulars with regard to the anti-typhoid inoculations undertaken.—Soon after the commencement of the epidemic Mr. Conolly Norman, the superintendent of the asylum, applied to me for a supply of anti-typhoid vaccine. This having been placed at his disposal a first batch of 45 patients was inoculated by Mr. Cullinan on Sept. 6th. When these had recovered from the effects of the inoculation another batch was taken in hand, until on Nov. 30th, after a series of 17 sittings, a total of 511 persons had been inoculated. The inoculations were carried out exclusively upon insane inmates below the age of 55 years. No member of the nursing staff underwent the operation. The dose of the particular vaccine administered was in each case 0·75 cubic centimetre, this being the dose which had been fixed upon as appropriate in the case of soldiers proceeding to South Africa. The symptoms produced by the inoculation are described as follows by Mr. Cullinan in a paper published in the *Dublin Journal of Medical Science* in July, 1901:—

> The constitutional disturbance following the inoculation did not prove in any of the cases in my experience to be of great severity. In every case almost the temperature rose within a couple of hours, in some few instances reaching 103° and 104° on the day of operation, while 101° and 102° were common heights for it to attain. It usually fluctuated for a couple of days, coming down gradually from the maximum, and being generally normal on the third day. In every case operated on all the temperature records were kept. Except in the cases already specially mentioned[1] patients were able to be up and about on the fourth day. The principal symptom was headache, from which 85 suffered, some of them very severely; vomiting or retching occurred in 63 cases; loss of appetite and refusal of food in 33; diarrhœa in two; rather severe prostration in three; four complained of abdominal pain; while stiffness in the back and soreness over the seat of inoculation occurred in nine and 22 cases respectively. The last symptom of soreness in the flank, where each patient was vaccinated, was not in any case accompanied by local manifestation beyond a slight redness of the part and some swelling.

In the light of the constitutional symptoms here described[2] and certain events to which attention is drawn below I think that a somewhat smaller dose of vaccine might appropriately have been prescribed by me. It must, however, be noted that the circumstances did not admit of two successive inoculations being undertaken, and no estimate could be formed as to how far the patients would at the time of inoculation be exposed to the risk of infection.

Particulars with regard to the number of susceptible persons exposed to infection.—Mr. Cullinan estimates that after excluding all patients above 55 years of age as insusceptible, the total number of susceptible persons exposed to infection

[1] The reference is to Cases 1, 2, and 6, reported below.
[2] In this connexion vide THE LANCET, Sept. 14th, 1901, p. 715.

at the date on which the inoculations were begun may be fixed at 655; 541 of these were insane inmates, the balance of 114 being nurses. Of the former, as we have seen, 511 were ultimately inoculated.

Number of cases of typhoid fever which occurred in the inoculated and in the uninoculated respectively after the commencement of the inoculations.—On and after Sept. 6th 29 and seven cases of typhoid fever respectively occurred in the uninoculated and the inoculated groups. Before considering the question as to what was the relative incidence of cases in the two groups the circumstances of each of the seven cases which occurred among the inoculated may be briefly considered.

CASE 1.—The patient was discovered to be ill on Sept. 6th. "In this case," says Mr. Cullinan, "owing to an oversight, the patient's temperature was not previously taken, but was found to be 101° immediately after the operation, remaining high, and at once assuming the characteristic curve of typhoid fever." In accordance with the history this case may be transferred from the category of cases which developed in inoculated patients to the category of cases which developed in uninoculated patients.

CASE 2.—The patient in question was inoculated on Sept. 19th and developed the disease on Sept. 22nd. "This case," says Mr. Cullinan, "was found to have a normal temperature and was apparently in good health before inoculation. The temperature rose after the operation, but instead of going down in a few days persistently remained high and assumed enteric features almost at once. ..... I think it may be concluded that she would have contracted the disease in any case." This conclusion that the patient had contracted the infection before inoculation would appear to be justified, inasmuch as the interval of two days usually covered by the febrile reaction produced by inoculation would appear to be much less than would be required for the incubation of the disease. None the less I have in the statistical table given below refrained from formally excluding this case from the category of cases occurring in the inoculated. I have contented myself with distinguishing it by the use of italics, brackets, and a note of interrogation from the other cases included in that category.

CASE 3.—"The patient in question was inoculated on Sept. 22nd, and on the 24th was quite well apparently, but on the 28th was found to have a temperature of 100° and a couple of doubtful spots. On the 30th there was a typical crop of spots. The case from that out *was a severe one* ..... I would not [the quotation is still from Mr. Cullinan's paper] place this case definitely among those suffering from prodromal signs at the time of inoculation, but ..... as the spots began to appear six days after the operation I think we may fairly refrain from blaming the inoculation." In view of the possibility that the incubation period may run a shorter course in a patient who has in the meantime been subjected to inoculation it will be well to retain this case in the category of cases contracted subsequently to inoculation.

CASE 4.—The patient in question, a girl who had been inoculated on Oct. 3rd, having left the hospital three days after the operation, was attacked *very severely* on Oct. 15th. She was found on this day to have a crop of spots. *This patient died.*

CASE 5.—Inoculation was here performed on Sept. 22nd, and the patient, "who had been quite well in the interval," developed typhoid fever eight weeks subsequently "and was found to have a profuse crop of spots." Obviously there can be no doubt as to how this case is to be classified.

CASE 6.—The patient was inoculated on Nov. 12th and "was very ill after the operation, and continued so with a high temperature. On the 20th she had a crop of spots, having had all the appearances of typhoid in the interval." Mr. Cullinan feels disposed to regard this as a case in which the patient was sickening for the disease at the time of inoculation. This assumption seems to me justified in view of the short period which elapsed between inoculation and the development of the typhoid spots. The fact that the patient was "very ill after the operation" also points in this direction. None the less it will, as in Case 3 considered above, be preferable for the purposes of our statistical comparison to retain it in the category of cases contracted subsequently to inoculation.

CASE 7.—The patient, "a woman of about 50 years of age, operated upon on Nov. 5th, and getting over the effects in three days, was found on Nov. 17th with a temperature of 101°, and had a *very severe attack*, followed by a *relapse from which she nearly died.* I consider," says Mr. Cullinan, "that on this case the serum—meaning thereby the typhoid vaccine—acted detrimentally and probably accentuated the severity of the attack."

Having in a very recent communication[3] discussed the general issue raised by Mr. Cullinan's comment, I may here leave the italics in the above protocols to speak to the attentive reader and proceed at once to summarise the results of the above analysis. That analysis has shown that of the inoculated persons attacked by the disease the *first* had certainly developed the fever before inoculation; the *second* had almost certainly contracted the infection before inoculation; and the *third* and *sixth* had also probably contracted it before inoculation. In the case of the *fourth* and *seventh* patients if the infection was, as would seem probable, contracted subsequently to inoculation it must have been contracted immediately afterwards, while the patients were still suffering from the effects of the operation. Thus the *fifth* patient would appear to have been the only one among the seven inoculated patients attacked who contracted the infection after the clinical symptoms due to the operation had passed off. Let us, however, for the purposes of our statistical comparison, admit that the last five, or even the last six, of the seven inoculated patients who were attacked may have contracted the disease subsequently to inoculation.

Manner in which a comparison can be instituted between the incidence of cases in the inoculated and in the uninoculated.—Our task will, then, be to express in the form of a valid comparison the fact that out of a body of 655, who consisted in part of inoculated and in part of uninoculated persons, five—or if we include Case 2 mentioned above, six—cases of typhoid fever occurred in the inoculated, while 30—or if we exclude Case 2 just referred to, 29—cases occurred in the uninoculated.

The first point which comes up for consideration in this connexion is the question as to whether the 114 uninoculated nurses who are included in the total of 655 susceptible persons were exposed to a greater risk of infection than the insane inmates. If they were not exposed to greater risk they may obviously be included among the "controls." In connexion with the risk incurred by the nursing staff Mr. Cullinan writes that "none of the nurses who contracted the disease contracted it by attendance on inmates suffering from enteric fever. All the nurses attacked were ordinary divisional nurses who spent their days in the same room as the inmates and for the most part slept off the dormitories, being in all respects as liable to infection as the inmates, except in the respect that sane people have, from the point of view of the risks undergone by them, in my opinion, a considerable advantage over the insane." It may, therefore, be taken that the nurses were at any rate not exposed to greater risks of infection than were the patients, and hence the figures relating to these may, equally with the figures relating to the uninoculated insane, be utilised for the purpose of instituting a comparison between the inoculated and the uninoculated. The complete data which have been furnished to me by Mr. Cullinan admit of two such comparisons being instituted. The first of these comparisons is a comparison between the number of cases occurring subsequently to the date of the completion of the inoculations in 504 inoculated persons[4] (insane inmates) and 114 uninoculated persons[5] (nurses). This comparison is as follows:—

Number of Cases occurring in the Uninoculated and Inoculated respectively in the interval between the Completion of the Inoculations on Nov. 30th and the Development of the Last Case of Enteric Fever on Dec. 24th.

—	Number of persons under 55 years of age under observation.	Number of cases.	Number of deaths.
Uninoculated ...	114	5	0
Inoculated ...	504	0	—

The comparison in question brings out in a striking manner the comparative immunity of the inoculated; it is, however, robbed of a great deal of its interest by the fact that the

[3] THE LANCET, Sept. 14th, 1901, p. 715.

[4] This number is arrived at by subtracting the seven inoculated patients who developed the disease from the total of 511 who were inoculated.

[5] The number of nurses was kept up to 114 by replacing those attacked by the fever.

period of observation which is covered by the comparison is here a very short one. A comparison based on the average daily strength of the inoculated and the uninoculated will, therefore, be of greater interest, covering as it does the whole period of three and a half months from the commencement of the inoculations to the termination of the epidemic. For the purposes of such a comparison Mr. Cullinan has kindly furnished me with (*a*) the number of patients operated upon by him at each sitting and the dates of these inoculations; (*b*) a list of nurses and patients attacked with typhoid fever; and (*c*) a list of patients who died from other diseases or who were admitted or discharged during the period of observation. The third document may be left out of account as it shows that the number of individuals of a susceptible age who were admitted or discharged or who died from other diseases during the period of observation was so small as to be incapable of exerting any appreciable effect upon the general result. Having simplified our task in this way, we arrive at the number of the inoculated and uninoculated on each successive day by taking into account (*a*) the alterations in the number of the inoculated and uninoculated brought about by the successive inoculations and (*b*) the alterations in these numbers brought about by the development of typhoid fever in members of each group. Taking the numbers thus arrived at we now multiply in each case by the number of days during which that particular strength was maintained. Finally, we add together the figures relating to each group and divide in each case by the number of days included within the whole period of observation. In this manner we arrive at a daily average strength of 339 for the inoculated and of 298 for the uninoculated. We now institute our comparison by dividing the number of typhoid-fever cases which occurred in the inoculated and uninoculated groups respectively into the average strength of each group. Before considering the statistical result thus arrived at it will be well to realise why we are here justified in regarding a result obtained in the manner which has just been indicated as the result which correctly represents the relative incidence of typhoid fever in the inoculated and uninoculated groups. We shall realise this if we consider what is the assumption to which we are committed by the method of calculation here adopted. That assumption is that the cases of typhoid fever among the inoculated would not have been more numerous if the number of inoculated had stood throughout at 339 instead of standing, as it in reality did, at a lower figure on all dates previously to Nov. 5th and at a higher figure on all dates subsequently to this particular day. Now this assumption is manifestly justified if the risk of contracting typhoid fever was as great in the period between Nov. 5th and Dec. 24th when the inoculated numbered more than 339 as in the period between Sept. 6th and Nov. 5th when the inoculated numbered less than 339.

Mr. Cullinan's list of cases and dates of attack shows that this condition was satisfied, and more than satisfied, 16 cases of typhoid fever having occurred in the smaller number of uninoculated exposed to infection in the period subsequently to Nov. 5th, as against 14 cases in the larger number of uninoculated exposed in the earlier period. In conformity with this it may be confidently assumed that the comparison based on the average daily strength is a comparison which does not here exaggerate in favour of the inoculation procedure. The comparison in question is as follows:—

Comparative Incidence of Typhoid Fever in Inoculated and Uninoculated calculated upon the Average Strength of the Respective Groups during the Period intervening between the Commencement of the Inoculations and the Termination of the Epidemic.

—	Average strength.	Number of cases.	Number of deaths.	Percentage of cases.	Percentage of deaths.
Uninoculated	298	30 (– 1?)	4	10·1	1·3
Inoculated ...	339	5 (+ 1?)	1	1·5	0·3

It may be noted in conclusion that the result is in conformity with that of all the statistical returns of anti-typhoid inoculation which have reached me.

Netley.

THE EFFECTS OF LEAD UPON LEAD-WORKERS IN THE STAFFORDSHIRE POTTERIES.

BY FRANK SHUFFLEBOTHAM, M.A., M.B., B.C. CANTAB.

WITH a view of determining to what extent the health of lead-workers in the Staffordshire potteries is affected by their employment I have made systematic examinations of the workers employed in 13 factories. These examinations have not been of selected cases, but include all the workpeople (with one exception) engaged in lead processes at the factories which I have visited, and my choice of these factories was made in the endeavour to obtain a series of potteries which might be regarded as a fair representation of the whole industry. Table I. gives the firms whose workpeople I have examined as well as their products of manufacture.

TABLE I.—*Showing the Names and Situations of the Firms and Products of Manufacture where the Persons examined were employed.*

No.	Name of firm.	Situation.	Products of manufacture.
1	Booths.	Tunstall.	Earthenware and tiles.
2	Doulton and Co.	Burslem.	Earthenware, china, and sanitary ware.
3	Dresden Porcelain Co.	Longton.	China.
4	T. Forester and Sons.	Longton (Phœnix and Mill Works).	Majolica and art pottery.
5			
6	W. H. Grindley and Co.	Tunstall.	Semi-porcelain.
7	Grove and Co.	Longton.	Earthenware.
8	Hawley, Webberley, and Co.	,,	Earthenware and majolica.
9	Longton Porcelain Co.	,,	China.
10	J. and G. Meakin	Hanley (Eagle and Eastwood Works).	Semi-porcelain and granite.
11			
12	Ridgways.	Shelton.	Earthenware and semi-porcelain.
13	Josiah Wedgwood and Sons	Etruria.	Earthenware, china, majolica, and tiles.

Between 6000 and 7000 people are employed at these manufactories, of whom 528 are engaged in lead processes. The figures here given show the approximate ratio of lead-workers to the total number of operatives throughout the whole of the Staffordshire potteries.

These lead processes involve many different occupations, the nature of which I will briefly explain. They may be divided into two main divisions, the first of which comprises the various operations of glazing, while under the second heading may be grouped certain decorative processes in which lead compounds are used for their colour effects. In the former group the work is subdivided between dippers, dipping-house assistants, ware-cleaners, and glost-placers. "The dipper's business is to coat the 'biscuit' ware with a layer of glaze by plunging it into a bath containing the finely-ground glazing materials in suspension in water" (Burton). Lead compounds are essential constituents in the preparation of glazes for every kind of pottery except hard porcelain and salt-glazed ware. The assistants in the dipping-house hand up the ware to the dipper and take it from him when it has been dipped, and the ware-cleaners "examine the pieces to see that they are properly dipped and remove all superfluous glaze by scraping with a knife or other suitable means." The glost-placer packs the glazed ware into saggers which he carries into the ovens where the glaze is melted on. Dippers and glost-placers are invariably adult males, dipping-house assistants are either boys or young women, while ware-cleaning is an occupation carried on generally by females, but in some factories youths are employed for this purpose. In the principal decorative processes which entail the use of lead women and girls are for the most part engaged. The majolica paintress paints coloured glazes upon the ware, and the

TABLE II.—SHOWING THE OCCUPATIONS OF THE PERSONS EXAMINED AND THE TIME THEY HAVE WORKED IN LEAD.

No.	Occupations.	Men. Time they have worked in lead. Over 30 years.	Between 20 and 30 years.	Between 15 and 20 years.	Between 10 and 15 years.	Between 5 and 10 years.	Under 5 years.	Total men.	Women. Time they have worked in lead. Over 30 years.	Between 20 and 30 years.	Between 15 and 20 years.	Between 10 and 15 years.	Between 5 and 10 years.	Under 5 years.	Total Women.	Grand total.
1	Millers...	2	3	1	1	2	4	13	—	—	—	—	—	—	—	13
2	Glaze and colour-mixers	—	—	—	2	1	5	8	—	—	—	—	1	4	5	13
3	Dippers	7	6	5	8	17	8	51	—	—	—	—	—	—	—	51
4	Dipping-house assistants	1	—	—	—	1	28	30	—	—	—	2	3	43	48	78
5	Ware-cleaners	—	—	—	—	2	1	3	—	2	1	—	4	19	26	29
6	Glost-placers	23	35	37	47	47	36	225	—	—	—	—	—	—	—	225
7	Sagger-washers	—	—	—	—	3	6	9	—	—	—	—	—	—	—	9
8	Majolica-paintresses ...	—	—	—	—	—	—	—	2	8	1	6	3	10	30	30
	Cyprian workers	—	—	—	—	—	—	—	—	1	—	—	—	8	9	9
9	Ground-layers	—	1	1	—	1	1	4	—	—	—	1	2	5	8	12
10	Aerographers	—	—	—	—	—	—	—	—	—	1	—	—	23	24	24
11	Colour-dusters	—	—	—	—	—	—	—	—	—	—	—	2	12	14	14
12	Litho-chrome transferrers	—	—	—	—	1	2	3	—	—	—	—	4	7	11	14
13	Other employments ...	—	—	—	—	—	2	2	—	—	—	—	—	4	4	6
—	Totals	33	45	44	58	75	93	348	2	11	3	9	19	135	179	527

cyprian worker puts on the different coloured glazes at the dipping-tub. Ground-layers, aerographers, and colour-dusters are operatives who use lead compounds in the form of dust, which is applied to the surface of the ware after it has been glazed and fired. The glazes and colours are prepared by millers and glaze- and colour-mixers, and the sagger-washer is generally a labourer who devotes several hours in each week to washing the interiors of the new saggers with a lead-containing glaze. Table II. shows the occupations of the people I have examined and also the time they have worked in lead.

It should be noted at the outset that lead poisoning is a very subtle disease, which may assume many different forms the symptoms of which are common to other diseases, and its diagnosis should only be made after the most careful examination. The disease is characterised by the following symptoms: (*a*) anæmia, (*b*) blue line on the gums, (*c*) biliousness, and (*d*) headache, apart from biliousness; while in more severe cases we may find (*e*) constipation, (*f*) gout, (*g*) colic, (*h*) paralysis of the arms and the legs, (*i*) epilepsy, (*j*) insanity, (*k*) disturbance of vision, (*l*) abortion, and (*m*) that group of symptoms pointing to chronic Bright's disease. None of these symptoms, however, are pathognomonic of lead poisoning. Anæmia is the commonest disease to which girls and young women are subject, whether they work in lead or not. Headache is one of those complaints of which everyone has had experience more or less; when accompanied by loss of appetite, nausea, and vomiting its cause may be traced to carious teeth, to improper food, or to alcoholism. Constipation may be due to 50 different causes: it is often a family complaint, or it may result from coarse food or sedentary habits. Again, lead is not the only cause of colic. Heredity is an important predisposing cause to gout, to chronic Bright's disease, and to abortion, and along with chronic alcoholism in the parent and syphilis is a potent factor in the production of epilepsy and insanity. In a patient suffering from lead poisoning the blue line on the gums often gives the clue to the nature of the complaint, but the blue line unaccompanied by any of the above symptoms is not lead *poisoning*. When any of these symptoms have arisen in the 527 cases which have come under my notice I have endeavoured to ascertain their true causes and have not immediately jumped to the conclusion that lead was the source of all the trouble. In Table III. will be seen some of the results of my examinations.

Not a single case of gout, epilepsy, insanity, or disturbance of vision (excepting cases of presbyopia) had ever occurred in any of the 527 workpeople since they began to work in lead. A youth and a woman had suffered from epilepsy as children, and 24 work-people had a strong family history of this disease; but in spite of the predisposing tendency of their employment superimposed upon an hereditary liability none of them had been affected in any way. Near relations of 14 lead-workers have been confined in the county asylums for mental diseases. Again, we might expect to find that the hereditary tendency would be accentuated by their employment, but in no case was there any history or any sign of mental trouble in the lead-workers themselves. I have had

TABLE III.—*Showing the Results of the Examinations.*

No.	Symptoms.	Found in—	Remarks.	References to other Tables.†
1	Anæmia.	6 women.	All were anæmic before they commenced to work in lead.	V.(*a*)
2	Biliousness.	19 men.	Caused for the most part (1) by excessive alcohol drinking, and (2) by carious teeth.	IV.(*a*)
		30 women.	Caused by (1) carious teeth, and (2) by excessive tea-drinking. One woman was suffering from lead-poisoning. (See paralysis and Table V.(*a*).	V.(*a*)
3	Headache apart from biliousness.	21 men.	Caused by (1) carious teeth, (2) heat of ovens, and (3) weight of saggers (a large number of men temporarily suffer from headache after drinking bouts).	—
		35 women.	Caused by (1) constant use of hair-curlers, by (2) carious teeth, and by (3) heat of the workshops.	—
4	Constipation.	1 man.	Much below the general average.	V.(*b*)
		19 women.		
5	Colic.	1 woman.	Due to ovarian disease.	V.(*a*)
		4 men.*	At time of examination apparently enjoying good health.	IV.(*a*) IV.(*c*)
6	Paralysis of arms.	1 woman.	A marked case of paralysis of both arms, accompanied by vomiting, nausea, headache, constipation, in addition to the blue line on the gums. She was a majolica paintress who had worked in this occupation for 12 years.	V.(*a*)
7	Initial symptoms of chronic Bright's disease.	7 men.	Not a large number since 61 operatives had reached the age of 40 years. Three of the 7 men were brothers.	IV.(*b*)
		2 women.		

* In these cases there was a history of colic.

† The references in the last column will show which of the lead-workers included in the table have the blue line on the gums.

the opportunity of examining one man who was sent to Wolverhampton for electrical treatment, but after a careful examination and a quiet talk with him I was of the opinion that he had been suffering, and was suffering, from gonorrhœal rheumatism.

The blue line on the gums.—I have already remarked that the blue line on the gums, when unaccompanied by other symptoms, does not denote lead-*poisoning*. It merely indicates the presence of lead in the system. This blue line is a series of black dots along the edge of the gum, and consists of a deposit of lead sulphide formed by the action of the sulphur found in the tartar of the teeth on the lead-containing organic compound held in solution in the blood. It may be quite marked and observable by the naked eye; in some cases it is very faint and only seen by the aid of a magnifying lens. In nine lead-workers I noticed a general blueness of the gums, although no line was observed. There is one condition which may simulate a blue line. Several times I have seen between the edge of the gums and the teeth a deposit of soot (which in combination with common salt is frequently used as tooth powder) look at first sight very much like the blue line, but on using a lens the error has been detected. Tables IV. and V. give details of each lead-worker in whom the blue line or blueness of the gums was perceived.

Abortion.—It is a reputed fact that the wives of lead-workers are prone to abortion, but my own observations hardly confirm this. 188 of the men were married and the wives of 19 of them had had one miscarriage each, seven had had two miscarriages each, and four three miscarriages. The wives of the remaining 158 married men had had no miscarriages. In six cases the miscarriages took place before

TABLE IV.—GIVING DETAILS OF THE MEN (*a*) WITH A DEFINITE BLUE LINE ON THE GUMS; (*b*) WITH A FAINT BLUE LINE OR ONE ONLY OBSERVABLE WITH A MAGNIFYING LENS; AND (*c*) WITH NO BLUE LINE BUT WITH GENERAL BLUENESS OF THE GUMS.

(*a*) *Men with a Definite Blue Line on the Gums.*

No.	Occupation.	Age.	Number of years worked in lead.	Previous medical history.		Condition of health at time of examination.	No. of years married.	Number of children.	Number of miscarriages.
				Illnesses depending on their work.	Illnesses independent of their work.				
1	Glost-placer.	32	16	Colic in 1896.	None.	Good. No constipation.	11	3	—
2	Dipper.	42	28	None.	—	Alcoholic cirrhosis of the liver.	17	3	2
3	Glost-placer.	38	28	,,	Rheumatic fever in 1879; chronic bronchitis for years.	Chronic bronchitis.	14	7	—
4	,,	34	14	,,	—	Markedly alcoholic; acne rosacea, dyspepsia, morning sickness.	11	4	—
5	,,	47	37	,,	Operation for tuberculous glands in the neck in 1879; influenza in 1897.	Good.	15	3	—
6	,,	38	27	Stoppage in bowels at age of 13 years.	Never ill since.	,,	14	4	1
7	Dipper.	19	7	None.	None.*	,,	—	—	—
8	,,	19	5½	,,	,,*	,,	—	—	—
9	Dipping-house assistant.	59	1	None (plate-maker previously).	,,*	,,	36	16	—
10	Dipper.	39	23	Stoppage in bowels in 1895.	,,	,,	11	—	—
11	Sagger-washer.	26	10	None.	,,*	,,	—	—	—
12	Glost-placer.	40	26	,,	,,*	,,	—	—	—
13	,,	50	34	,,	Chronic bronchitis for years.	Chronic bronchitis.	23	8	—
14	,,	35	20	,,	Lumbago in 1895.	Good.	9	4	—
15	,,	46	28	,,	None.*	,,	21	8	—

(*b*) *Men with a Faint Blue Line or one only observable with a Magnifying Lens.*

1	Glost-placer.	28	8	None.	None.*	Good.	7	3	—
2	Dipper.	16	2	,,	,,*	,,	—	—	—
3	,,	48	38	Chronic Bright's disease. This might be independent of the lead work and in my opinion is so.	Variola at age of 19 years; chronic bronchitis for years; chronic Bright's disease.	Chronic Bright's disease; chronic bronchitis.	27	8	—
4	,,	17	5	None.	None.*	Good.	—	—	—
5	Sagger-washer.	19	6	,,	,,*	,,	—	—	—
6	Miller.	22	8	,,	,,*	,,	4	1	—
7	Dipping-house Assistant.	16	2	,,	,,*	,,	—	—	—
8	,,	15	5 weeks	,,	,,*	,,	—	—	—
9	Dipper.	29	9	,,	,,*	,,	1½	1	—
10	Glost-placer.	34	22	,,	,,*	,,	11	5	—
11	,,	23	12	,,	,,*	,,	—	—	—

(*c*) *Men with no Blue Line but with General Blueness of the Gums.*

1	Glost-placer.	32	4	None.	None.*	Good.	11	7	1†
2	Dipper.	34	24	Colic in 1896.	No other illness.	,,	15	6	—
3	,,	22	8	None.	None.*	,,	—	—	—

* In these cases not a single day's work had been lost through ill-health since the operative commenced to work in lead.
† In this case the miscarriage took place before the husband commenced to work in lead.

TABLE V.—GIVING DETAILS OF THE WOMEN (*a*) WITH A DEFINITE BLUE LINE ON THE GUMS; (*b*) WITH A FAINT BLUE LINE OR ONE ONLY OBSERVABLE WITH A MAGNIFYING LENS; AND (*c*) WITH NO BLUE LINE BUT WITH GENERAL BLUENESS OF THE GUMS.

(a) Women with a Definite Blue Line on the Gums.

No.	Occupation.	Age.	Number of years worked in lead.	Previous medical history.		Condition of health at time of examination.	Number of years married.	Number of children.	Number of miscarriages.
				Illnesses depending on their work.	Illnesses independent of their work.				
1	Majolica paintress.	26	13	Constipation for years (which might be independent of lead).	Colic due to ovarian disease.	Ovarian swelling and tenderness; piles; no blue line round anus.	5	—	—
2	Majolica paintress; sister to No. 1.	24	12	Paralysis of arms for 10 months, accompanied by vomiting, headache, &c.	—	Marked paralysis of both arms.	—	—	—
3	Ware-cleaner.	22	5	None.	None.*	Good.	—	—	—
4	Majolica paintress.	38	20	,,	,,*	,,	16	4	1
5	Cyprian worker.	23	4	Certified as suffering from lead-poisoning in 1899.	—	,,	6	3	—
6	Dipping-house assistant.	23	5	Suspended from work in March, 1901.	Anæmia for last nine years.	Anæmia.	—	—	—
7	,,	18	4	None.	None.*	Good.	—	—	—

(b) Women with a Faint Blue Line or one only observable with a Magnifying Lens.

1	Dipping-house assistant.	17	3 months	None.	None.*	Good.	—	—	—
2	,,	19	6 months	,,	,,*	,,	—	—	—
3	Ware-cleaner.	24	6 months	,,	,,*	,,	5	2	1 †
4	Dipping-house assistant.	43	6 months	,,	None* (constipation for last four years).	,,	25	5	—
5	Ware-cleaner.	21	4	,,	,,*	,,	1½	1	—
6	,,	20	5	,,	,,*	,,	—	—	—
7	Dipping-house assistant.	16	1	,,	,,*	,,	—	—	—
8	,,	15	6 weeks	,,	,,*	,,	—	—	—
9	,,	19	8 months	,,	,,*	,,	—	—	—
10	Aerographer.	20	2	,,	,,*	,,	—	—	—
11	Colour-grinder.	16	2	,,	,,*	,,	—	—	—

(c) Women with no Blue Line but with General Blueness of the Gums.

1	Majolica paintress.	33	20	None.	Dyspepsia for years on account of shocking condition of teeth.	Dyspepsia.	13	1	Many
2	,,	49	3	,,	None.*	Good.	22	2	2†
3	Dipping-house assistant.	18	3	,,	Attack of acute indigestion in 1900.	,,	—	—	—
4	Aerographer.	39	2	,,	Was treated for gastric ulcer in 1898. None since working in lead.*	,,	20	7	—
5	,,	26	3	,,	None.*	,,	—	—	—
6	Litho-chrome transferrer.	18	2	,,	,,*	,,	—	—	—

* In these cases not a single day's work had been lost through ill-health since the operative commenced to work in lead.
† In this case the miscarriages took place before the mother commenced to work in lead.

the husband commenced to work in lead. Table VI. (*a*) gives statistics as to the number of pregnancies of the lead-workers' wives who have never aborted, from which it will be seen that these people are very fertile. Table VI. (*b*) offers similar information about the wives who have had miscarriages. A comparison between these tables shows that in Table VI. (*b*) not only is the average number of pregnancies greater than in Table VI. (*a*), but also the average number of normal confinements. Two of the men whose wives appear in Table VI. (*b*) are found in Table IV. (*a*) as showing a distinct blue line on the gums, but neither of these men could be said to be suffering from lead-poisoning. The majority of the miscarriages recorded in Table VI. (*b*) are most probably due to the frequency of the pregnancies.

Among the married female workers 18 had had miscarriages out of a total of 55; seven of these had miscarriages before they commenced to work in lead, and three other women had an hereditary tendency to abort. Many of the miscarriages are due to the fact that the women continue their work as usual during the time they are pregnant to within a day or two of confinement. Reference to Tables V. (*a*), V. (*b*), and V. (*c*), will show that four women who experienced miscarriages had the blue line on the gums, one of whom had

TABLE VI. (*a*).—*Showing the Number of Pregnancies in Lead-workers' Wives who have never Aborted.*

Number of years married.	Number of wives.	Total number of pregnancies.	Number of pregnancies in one family.		Average number of pregnancies in one family.*
			Maximum.	Minimum.	
Over 30 years	7	59	16	4	8·4
Between 20 and 30 years...	25	167	12	0	6·6
,, 15 ,, 20 ,, ...	15	79	12	1	5·2
,, 10 ,, 15 ,, ...	27	112	7	0	4·1
,, 5 ,, 10 ,, ...	30	80	5	0	2·6
,, 2 ,, 5 ,, ...	32	49	3	1	1·5
Under 2 years	22	20	2	0	0·9

* The average number of pregnancies of a married woman is 4·5 (Landois and Stirling).

her miscarriages before she worked in lead. All four had never lost a single day's work through ill-health in their lives. Although the number of married women working in lead was small I have ventured to tabulate them in the same way as the wives of the male operatives. Tables VII. (*a*) and VII. (*b*) will correspond respectively to Tables VI. (*a*) and VI. (*b*).

TABLE VI. (*b*).—*Showing the Number of Pregnancies and Miscarriages in Lead-workers' Wives who have Aborted.*

Number of years married.	Number of wives.	Total number of pregnancies.	Total number of miscarriages.	Total number of normal confinements.	Average number of pregnancies in one family.	Average number of normal confinements in one family.
Over 30 years	3	35	6	29	11·6	9·6
Between 20 and 30 years	6	52	10	42	8·6	7·0
,, 15 ,, 20 ,,	3*	25	5	20	8·3	6·6
	5	33	8	25	6·6	5·0
,, 10 ,, 15 ,,	1*	8	1	7	8·0	7·0
	4	24	7	17	6·0	4·2
,, 5 ,, 10 ,,	4	19	4	15	4·7	3·7
,, 2 ,, 5 ,,	4	12	4	8	3·0	2·0
Under 2 years	—	—	—	—		—

* In these cases the miscarriages took place before the husbands commenced to work in lead.

TABLE VII. (*a*).—*Showing the Number of Pregnancies in Women working in Lead.*

Number of years married.	Number of women.	Total number of pregnancies.	Number of pregnancies in one family.		Average number of pregnancies in one family.
			Maximum.	Minimum.	
Over 30 years	2	18	11	7	9·0
Between 20 and 30 years...	5	22	7	0	4·4
,, 15 ,, 20 ,, ...	6	21	6	1	3·5
,, 10 ,, 15 ,, ...	2	0	0	0	0
,, 5 ,, 10 ,, ...	7	11	4	0	1·5
,, 2 ,, 5 ,, ...	6	11	3	1	1·8
Under 2 years	9	5	2	0	0·6

TABLE VII. (*b*).—*Showing the Number of Pregnancies and Miscarriages in Women working in Lead who have Aborted.*

Number of years married.	Number of women.	Total number of pregnancies.	Total number of miscarriages.	Total number of normal confinements.	Average number of pregnancies in one family.	Average number of normal confinements in one family.
Over 30 years	1*	6	1	5	6·0	5·0
	1	2	1	1	2·0	1·0
Between 20 and 30 years	1	4	2	2	4·0	2·0
,, 15 ,, 20 ,,	1*	4	1	3	4·0	3·0
	4	28	6	22	7·0	5·4
,, 10 ,, 15 ,,	5*	27	5	22	5·4	4·4
	5	?	?	12	?	2·4
,, 5 ,, 10 ,,	—	—	—	—	—	—
,, 2 ,, 5 ,,	—	—	—	—	—	—
Under 2 years	—	—	—	—	—	—

* In these cases the miscarriage took place before the mothers commenced to work in lead.

Final conclusions.—After giving each case which has come under my observation full consideration I have come to the following conclusions:—

1. That of the 527 lead-workers I only met with one case of lead-*poisoning*.

2. That individual symptoms, which at first sight might have been attributed to lead-poisoning, were found upon closer examination to be due to other causes.

3. That the health record of the lead-workers was excellent (the complaints I have mentioned are for the most part only minor ailments). Of 348 men 196 have not lost a single day's work through ill-health from any cause whatever since they commenced to work in lead, and the same may be said of 90 out of 124 single women; 26 out of 55 married women have only been absent through confinements.

4. That the general condition of the work-people was good and would compare favourably with that of a like number of workers in any average healthy trade.

5. That the 91 operatives who had worked in lead for over 20 years were not suffering any ill-effects from their employment, although they had worked for years under practically no regulations.

6. That it must always be remembered that lead-workers are subject to the common ailments of life just in the same way as other people.

Newcastle-under-Lyme.

ACUTE DILATATION OF THE STOMACH, WITH ILLUSTRATIVE CASES.[1]

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ACUTE dilatation of the stomach is characterised by its sudden onset, by the vomiting of enormous quantities of fluid, and by very severe general symptoms, which in the recorded cases have always ended fatally within a few days after the first onset of the disease. The condition was first fully described by Dr. Hilton Fagge[2] who recorded four cases, two of which had come under his own personal observation. Since then a case has been recorded by Mr. Henry Morris,[3] but beyond these the subject does not appear to have attracted much attention. I have during the past three years made post-mortem examinations upon four cases in which death was immediately due to this condition, and I believe that the disease, though of course very uncommon, is not so rare as has generally been supposed, and that probably the difference between the very serious cases and the less severe forms of dilatation, also acute, which not infrequently accompanies severe illnesses, is one of degree rather than of kind. Before referring to the cases recorded by others I will give a brief account of those which have come under my own notice, and I must here acknowledge my indebtedness to Mr. Henry Morris and Dr. Kingston Fowler who have kindly allowed me to make use of the clinical notes of cases which have been under their care. The first case is one in which acute dilatation suddenly supervened upon chronic dilatation, the latter being due to a growth of the pylorus.

CASE 1.—The patient was a man, aged 48 years, who was admitted into the Middlesex Hospital on Oct. 31st, 1899, under the care of Dr. Kingston Fowler. Symptoms had existed for three months before admission, the chief being discomfort after food and frequent vomiting. On admission the patient was found to be considerably emaciated; the stomach was dilated and extended downwards to about an inch above the umbilicus; no splash was obtained. An indefinite tumour could be felt in the epigastrium. The pulse was 84, regular, and the patient, considering the disease he was suffering from, did not appear to be unduly ill, and certainly presented no immediate symptoms of an alarming character. On Nov. 3rd—i.e., three days after admission—the stomach was washed out in order to relieve the vomiting, which occurred at intervals and which in no way differed from that which usually takes place in cases of pyloric cancer. On this occasion 38 ounces were drawn off with a soft syphon tube. The patient expressed himself as feeling relieved by

[1] A paper read before the Royal Medical and Chirurgical Society on Oct. 22nd, 1901.

[2] Guy's Hospital Reports, 1872-73.

[3] Transactions of the Pathological Society of London, vol. xxxiv.

the washing, and the process was repeated on the following morning (the 4th), no vomiting having occurred in the interval. Relief was again obtained and the patient was able to take about half a pint of beef-tea and a very little pudding at midday. Suddenly, during the afternoon, a change for the worse took place, which was ushered in by slight hiccough, accompanied by abdominal pain and uneasiness, which the patient attributed to flatulence; at 6 P.M. the pain was considerable; at 8 P.M. he vomited about eight ounces of thick, dark brown fluid; and an hour later (9.15 P.M.) he was very collapsed, with a feeble pulse of 120, a subnormal temperature, and cold extremities. There was now severe abdominal pain, the outline of the stomach was easily seen, and appeared to cover a greater area than formerly; there was no muscular rigidity, but the abdominal walls did not appear to move with respiration. In the face of these acute symptoms it was thought possible that a perforation of the stomach might have taken place. A quarter of a grain of morphia was given hypodermically and hot bottles were put to the feet; no food was given by the mouth. About midnight the patient was very wakeful, but slept after a second injection of morphia. The next day (the 5th) the patient was drowsy but said he had no pain; the pulse was 120 and the abdomen moved slightly with respiration; the lower border of the stomach now reached the umbilicus and a tympanitic percussion note could be obtained in the left axilla as high as the fourth rib. Nourishment was given by nutrient enemata and suppositories, which were retained. The general condition remained about the same all day, but towards evening he became more collapsed and at 6 P.M. a hypodermic injection of strychnine was given. The abdomen, however, became more distended. Death took place at 2.55 A.M. on the morning of the 7th. During the acute illness the urine had become very scanty, none at all was passed from 1 A.M. till midnight on the 5th, when a catheter was passed, but only one ounce was drawn off. At the post-mortem examination the contents of the abdomen were almost entirely obscured by the dilated stomach, which was tightly distended with gas and also contained a considerable quantity of dark brown fluid. In shape the stomach was cylindrical, the lesser curvature making a sharp curve, while the greater curvature was rounded and reached a point just below the level of the iliac crest. There was a growth of the pylorus which considerably narrowed the orifice.

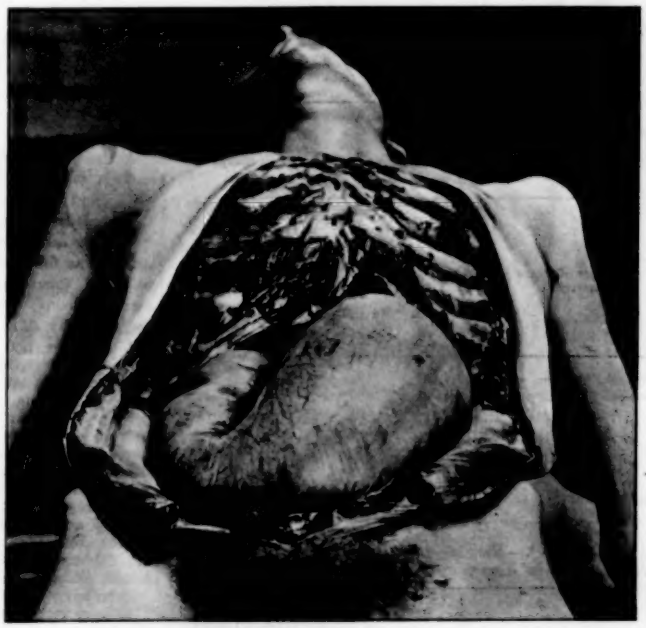
This case, then, is an example of acute dilatation suddenly supervening upon a chronic one; owing to the stricture the stomach had, no doubt, for some time had a considerable strain put upon it, and then suddenly acute dilatation set in. Possibly the slight irritation produced by washing out the stomach may have upset the balance or, and what I think is more likely, the growth may have implicated some of the nervous structures in the neighbourhood.

The second case occurred after an exploration of the kidney.

CASE 2.—The patient, a man, aged 26 years, was admitted under the care of Mr. Henry Morris with symptoms pointing to the presence of renal calculus, and on these grounds the right kidney was explored by a lumbar incision on July 30th, 1900; there was nothing of special note connected with the operation. Vomiting commenced a few hours after the operation was performed and persisted almost incessantly up to the time of death, which took place on the evening of August 4th. The temperature fluctuated a little but kept low, and reached 98° F. before death; the pulse was very rapid, varying from 120 to 140 per minute. There was no suppression of urine—on the day of death 33 ounces were passed. At the post-mortem examination, which was made on August 5th, I found the stomach to be enormously distended and of cylindrical shape, the lower end being on a level with the iliac crest; the first part of the duodenum was also distended. The contents of the stomach consisted of gas and a considerable quantity of thick green fluid. The intestines, with the exception of the first part of the duodenum, were all somewhat collapsed. There was no obstruction of the pylorus and no definite change of any kind was to be observed in the stomach walls. The recent incision into the right kidney was in process of healing and all the structures around it appeared to be healthy; there was some chronic nephritis of both kidneys.

CASE 3.—The patient was a female, aged 40 years, who was admitted into the hospital under my care (in the absence of Dr. Fowler), suffering with deep jaundice, which had come on suddenly with severe pain a few weeks previously. As the diagnosis between gall-stones and malignant disease was somewhat uncertain it was thought advisable to explore the abdomen; this was accordingly done by Mr. J. Murray on April 30th, 1901, the condition proving to be a growth of the head of the pancreas and a distended gall-bladder; the gall-bladder was drained and the wound was sutured. All went perfectly well till May 4th, when the patient passed a restless night and vomited early in the morning of May 5th. She also became very collapsed, but this may have been partially due to some hæmorrhage which occurred in the wound. The vomiting, however, persisted and large quantities of brownish fluid were thrown up; the urine became scanty and the temperature was subnormal before death, which took place on the 9th. The post-mortem examination showed the stomach to be greatly distended, but chiefly with gas, there being only a small quantity of greenish fluid present. The stomach had the same cylindrical appearances as in the other cases, but was not quite so large as any of the other three which I have met with. There was a hard tumour of the head of the pancreas, but it was not very prominent, and as far as could be seen it had not caused any definite obstruction to the pylorus, nor was any obvious dilatation of the stomach noted when the abdomen was explored.

FIG. 1.



Acute dilatation of the stomach complicating lobar pneumonia and pleurisy.

The next case is one in which acute dilatation occurred as a complication of pleurisy and pneumonia.

CASE 4.—The patient, a female, aged 24 years, was admitted into the hospital under the care of Dr. Fowler on June 26th, 1901. She was first taken ill on the 24th, and previously to that she had been in good health. On admission

there were signs of consolidation over the lower lobe of the right lung and also well-marked signs of pleurisy on the same side. The next morning (the 27th) there were some improvement and no signs of any extension of the disease; later in the day, however, there were pain and friction in the left side and at 1 P.M. the patient suddenly vomited. The vomiting continued incessantly from 1 P.M. on the 27th till 6.30 A.M. on the 28th, and then ceased till 1.5 P.M. the same day, when it re-commenced and continued till death, which took place at 2 A.M. on the 29th—i.e., about 36 hours after the vomiting first began. The vomit was of a dark greenish colour, and large quantities were brought up without any violent effort. The abdomen was very carefully examined on the 28th, but no distension was observed until 3 P.M. of that day. The urine was passed in usual quantities throughout the illness, but it may here be mentioned that at the post-mortem examination the bladder was perfectly empty. At the post-mortem examination the stomach was enormously distended and reached down to the pubes (*vide* Fig. 1). The stomach contained about 35 ounces of dark greenish fluid, and the mortuary attendant informed me that a large quantity had escaped by the mouth when the body was being removed. On relieving the stomach of its contents it rapidly shrank, and in a few minutes it had the appearance of being but little larger than normal, and no one seeing it would have thought that it could have been so enormously dilated only a few minutes before; the stomach walls appeared to be perfectly healthy. The intestines were collapsed, apparently from compression; there were no other abnormalities in any of the other abdominal organs except that the liver was rather larger than normal. In the thorax the lower lobe of the right lung was consolidated and in a condition of red hepatisation; there was no pneumonia elsewhere. Both pleuræ were extensively covered with a thick yellow exudation, which on the left side was particularly marked over the base of the lung where it rested on the diaphragm.

some surgical operation, which may or may not be connected with the abdomen. In the case recorded by Mr. Morris, which has already been referred to, the operation consisted in the removal of some necrosed bone from the foot; the patient began to vomit about an hour after the conclusion of the operation and brought up quantities of thin, greenish fluid almost continuously until death took place two days afterwards. The accompanying table shows the associations which have been observed between acute dilatation of the stomach and other lesions and surgical operations.

From this table the cases may be conveniently arranged in the following groups: (1) those in which the dilatation occurred without any apparent cause, and in which, after death, no other lesion was found (Case 2 and Case 3); (2) those in which after death some other lesion has been found (Cases 1, 4, 7, 9, and 10); and (3) those in which the dilatation has followed some surgical operation and in which after death no other lesion has been found (Cases 5, 6, and 8). In two cases there was some surgical interference as well as another lesion found after death—viz., in Case 7, in which a tube was passed into the stomach, and in Case 9, in which the abdomen was explored; and although these operations may have had a certain amount of influence in determining the onset of the condition there can, I think, be little doubt that the predominant factor was the growth in each, which, as will be seen later, produced the effects by implicating surrounding nerve structures. I may here mention another case, of which Mr. Henry Morris has kindly given me the notes, where the dilatation followed an operation. The patient, a thin weakly man, underwent nephrectomy for polycystic disease of the kidney, after which all the symptoms of acute dilatation set in: the abdomen became unsymmetrically distended and great quantities of fluid were vomited until the time of death. Although there can be no doubt as to the nature of the disease, as no post-mortem examination was obtained I have not included it in the table.

TABLE OF CASES OF ACUTE DILATATION OF THE STOMACH.

No. of case.	Author.	Reference.	Sex.	Age.	Morbid conditions found in addition to dilated stomach.	Operation (if any) prior to the onset of symptoms.
1	Hilton Fagge.	Guy's Hospital Reports, 1872-73.	M.	18	Retro-peritoneal abscess communicating with duodenum.	—
2	,,	,,	M.	30	*Nil.*	—
3	Miller and Humby.	Transactions of the Pathological Society, vol. iv.; also quoted by Fagge.	F.	48	*Nil.*	—
4	Hughes Bennett.	Principles and Practice of Medicine; also quoted by Fagge.	M.	26	Empyema.	—
5	Henry Morris.	Transactions of the Pathological Society, vol. xxxiv.	M.	37	*Nil.*	Operation upon the foot.
6	J. F. Goodhart.	,,	M.	29	*Nil*, except some œdema of the lungs.	Excision of the knee.
7	Campbell Thomson.	—	M.	48	Carcinoma of the pylorus.	Passage of soft tube into the stomach.
8	,,	—	M.	—	*Nil.*	Exploration of the right kidney (extra-peritoneal method).
9	,,	—	F.	40	Carcinoma of the pancreas.	Abdominal exploration.
10	,,	—	F.	24	Pneumonia and extensive diaphragmatic pleurisy, the latter chiefly on the left side.	—

Acute dilatation of the stomach may arise without any apparent cause whatever, the patient being, as far as one can tell, in ordinary health up to the time of the onset of acute symptoms. This was so in Dr. Fagge's second case, in which the patient died after three days' acute illness, and after death no other morbid condition was found except that of the stomach. Dr. Fagge considered that the actual process of enlargement of the stomach is more gradual and is in the end succeeded by sudden symptoms of great severity; but although this is sometimes the case—as, for instance, in the case I have recorded, where there was obstruction to the pylorus, and possibly also in the case in which there was a tumour of the pancreas—there is no reason whatever to believe that there was any slow dilatation previous to the acute symptoms in the other two cases.

In many cases (*vide* Table) some other morbid condition is found in addition to the dilated stomach, and in other instances the dilatation appears to follow immediately upon

There is yet another group of cases in which in debilitated subjects the ingestion of a large quantity of badly masticated food appears to have been the exciting cause. In a case mentioned by Dr. Walter Broadbent[4] a man, after tramping about the country for two days without food, and who was therefore very exhausted, partook of a large meal of roast pork, after which he was seized with abdominal pain and vomiting, which in spite of treatment terminated fatally in two days. After death the stomach was found to be enormously dilated, the lower border reaching nearly to the pubes. In a case recorded by Dr. W. H. Dickinson,[5] dilatation occurred in a child suffering from fatty degeneration of the heart, and after death the stomach, which was greatly distended, was inflated with gas and contained a large quantity of meat and potatoes, which were in lumps with sharp angles and edges, just as they had been cut by the nurse.

[4] Medical Magazine, July, 1901.
[5] Transactions of the Pathological Society of London, vol. xiii.

The following is a summary of the symptoms and post-mortem appearances:—

Distension of the abdomen.—As might be expected, the distended stomach gives rise to a swelling of the abdomen; the swelling is not uniform, but fills chiefly the left half and lower part of the abdomen, the right hypochondrium sometimes appearing to be flattened. This swelling, which is of diagnostic value, is not, however, quite constant, for in the case recorded by Mr. Morris it is stated that the abdomen was retracted, and after death, although the stomach was enormously dilated and occupied almost the whole of the abdomen, its anterior surface was said to be flattened. No doubt the abdominal swelling varies with the vomiting, especially in those cases where there is a large quantity of fluid in the stomach, as in one of Dr. Fagge's cases, where the swelling disappeared after a quantity of fluid had been removed by the stomach-pump. Peristaltic waves of contraction do not seem to have ever been observed in these cases, which, I think, rather opposes the theory suggested by Pepper and Stengel, that spasmodic contraction of the pylorus is the cause of the dilatation.

Vomiting.—Vomiting appears to be a constant symptom and usually large quantities of brownish or greenish fluid are brought up. The fluid is usually thin and watery and is generally vomited without causing the patient any great effort or distress.

Urine.—As a rule the urine becomes very scanty and almost entirely suppressed for the last 24 hours before death. In seven cases in which the condition of the urine is mentioned there was more or less suppression in five, and in three of these it was almost absolute during the last 24 hours of life; in two it is mentioned that a catheter was passed under the idea that there might be retention, but only a few drops of water were drawn off.

General symptoms.—The general symptoms are those of collapse; the pulse is small and very rapid, the respirations are frequent, and the temperature is low, usually subnormal. There is also great thirst, which is probably accounted for by the excessive vomiting of fluid.

Condition of the stomach.—The appearance of the stomach as seen after death is very characteristic; it is like a tightly distended cylinder, shaped like a V with one limb shorter than the other. The angle between the two limbs formed by the lesser curvature is a very sharp one (*vide* Fig. 2). The

FIG. 2.

Diagram of shape of stomach in acute dilatation.

walls of the stomach, though so much distended, do not after the stomach has collapsed appear to be much thinned, and, moreover, they retain their elasticity, as shown by the vomiting during life and by the contraction which occurs after death as soon as the contents are let out. There are, in fact, no definite abnormalities to be observed in connexion with the stomach walls.

Condition of the intestines.—The condition of the intestines varies. Usually they are collapsed and have the appearance of having been compressed by the distended stomach; sometimes parts of them may be distended, as in Dr. Fagge's first case, in which there was some distension of the cæcum and ascending colon.

The immediate cause of acute dilatation of the stomach probably depends upon some disturbance of the nervous system which gives rise to paralysis of the muscular walls and which also frequently causes excessive secretion into the stomach cavity. The only other explanation which seems within the bounds of possibility is that the distension might be caused by a rapid production of gas within the stomach. This mode of origin was actually suggested in one case in which the patient was known to have drunk two bottles of effervescing lemonade not very long before the acute symptoms began; but Dr. Hughes Bennett, under whose care the case was, rejected the idea and preferred to leave the cause unexplained rather than to suppose that gas sufficient to distend the stomach so enormously could have been generated by two bottles of lemonade. Neither is there, as far as I can find, any evidence whatever that there has been any undue putrefaction taking place in the stomach in any of these cases and, moreover, this view of the causation would not explain the occurrence of excessive secretion.

In considering the part which the nervous system may take in the production of acute dilatation there are two processes to be taken into account—viz., (1) the dilatation and (2) the increased secretion, and the question at once arises concerning the relationship of these two processes to each other; do they take place independently or is one dependent in some way upon the other? The inclination hitherto seems to have been to look upon the increase of secretion as the primary condition and to regard the dilatation as secondary and immediately dependent upon it. This appears to have been the view taken by Dr. Fagge when, in speaking of his first case, he says that the stomach was paralysed from over-distension and unable to rid itself of its burden. Mr. Henry Morris also took this view; he considered that both dilatation and vomiting were due to excessive secretion, and on these grounds proposed that the disease should be called "acute gastrorrhœa." In support of this view Mr. Morris quoted Moreau's experiments which showed that after a loop of intestine had been isolated by ligatures, and all the nerves passing to it along the mesentery cut, a paralytic secretion took place, and the intestine was found to contain a quantity of fluid which on chemical examination proved to be a very dilute intestinal secretion. Dr. P. H. Pye-Smith and Sir T. Lauder Brunton[6] have shown that the regulating influence conveyed by the nerves divided in Moreau's experiments arises from some of the ganglia in the solar plexus. As a result of Mr. Morris's paper Dr. J. F. Goodhart[7] brought forward notes of all the cases of dilated stomach not due to pyloric obstruction observed in the post-mortem room of Guy's Hospital from 1875 to 1882, and in the light of general information obtained from these Dr. Goodhart concluded that "paralysis of the viscus is, if not the determining cause, at any rate an accompanying condition." It is, of course, naturally very difficult to establish the exact relationship between the two conditions, but although they are so often present together, and produced by the same underlying cause, I think that the available evidence shows that they are at any rate distinctly separate processes and that the dilatation is not the mere mechanical result of excessive secretion. In some cases, for instance, there is very little fluid present, the stomach being in such cases almost entirely blown out by gas.

I have recently had an opportunity of observing a very interesting case in which the stomach appeared to be in an early stage of acute dilatation, and in this instance there was no fluid at all, and only a very slight trace of semi-solid, almost completely digested food. The patient was an old woman who died almost immediately after the conclusion of a severe operation upon the lower jaw, and at the post-mortem examination the stomach was distended with gas and had the cylindrical sausage-shaped appearance which is so typical in the more advanced cases. The appearance of the stomach in this case is seen in Fig. 3, which is taken from a sketch made at the time. The stomach, though much distended (it measured about nine inches in length in the longer limb and about seven inches at its greatest circumference), was nothing like the size which the others I have met with reached; but naturally there must be an early stage of the condition, and this case, I believe, is an example of such. This case, then, as far as it goes, tends to show that the distension may take place

[6] Reports of the British Association for the Advancement of Science, 1874 and 1875.

[7] Transactions of the Pathological Society of London, vol. xxxiv.

independently of the secretion, and some information regarding the relationship between the two processes may, I think, be obtained from the consideration of cases of chronic dilatation which depend upon pyloric obstruction. In many of these there is a very great secretion, just as there is in the acute cases. Osler and Macrae,[8] for instance, mention a case of dilatation of the stomach due to malignant growth of the pylorus in which on two occasions the stomach was

FIG. 3.

Appearance of a stomach which was apparently in an early stage of acute dilatation.

washed and emptied as thoroughly as possible, and for 48 hours afterwards the patient was fed by the rectum and all nourishment by the mouth was stopped. At the expiration of this time, on the first occasion 545 cubic centimetres of fluid were drawn off, and on the second occasion 500 cubic centimetres. In such cases as this the increased secretion is obviously secondary to the dilatation, as it also frequently is in cases of chronic dilatation which are not due to obstruction, and it seems therefore that the increased secretion is an accompaniment of, or a result of, the dilatation rather than a cause of it. The two conditions, there is little doubt, are independent processes which come into action separately or in combination, and it is most likely that their relative importance varies. There can be no doubt that excessive secretion, when present, adds greatly to the gravity of the situation, but there does not seem to be any clear proof that excessive secretion can act as the dilating force unless there is at the same time some paralysis of the stomach walls. The stomach derives its nerve-supply from the vagi and the splanchnic nerves; stimulation of the vagi gives rise to peristaltic movements, while stimulation of the splanchnic nerves brings the movements to a standstill. Sir Michael Foster,[9] in speaking of the nervous mechanism of the alimentary canal, says: "We may, therefore, speak of fibres inhibitory of peristaltic movements of the stomach and intestines as passing from the spinal cord through the splanchnic nerves and reaching those organs through the abdominal plexuses." With regard to the nervous mechanism of secretion Sir Michael Foster says: "It has been suggested that while impulses reaching the stomach along the vagi excite secretion those reaching the stomach along the sympathetic nerves inhibit it; but this has not been satisfactorily proved."

Dilatation of the stomach can probably be produced by the local interference of nerves of the stomach [10] or it may arise after a shock affecting the general nervous system. Examples of the latter are seen in cases such as that recorded by Mr. Henry Morris, where the dilatation followed an operation upon the foot, while examples of local interference are shown where the disease has followed some lesion in the neighbourhood of the stomach, and it is interesting to note how in Case 9 of the preceding table the onset of the condition appeared to coincide with the spreading of an acute pleurisy to the base of the left lung, which must be in close relationship to the nervous system of the stomach.

As cases of acute dilatation have followed closely upon operations it is necessary to inquire into the possibility of the anæsthetic having some influence in their causation. Mr. Morris considered this question fully with regard to his case and came to the conclusion that the anæsthetic was not to blame, and examination of the other cases does not show any direct evidence that the condition can be traced to this cause; but it would seem quite possible that under certain conditions an anæsthetic might influence the dilatation through its widespread effects upon the nervous system.

Acute dilatation of the stomach though of course very much more rare, is probably closely allied in its causation and nature to the paralytic distension of intestines which frequently occurs after severe abdominal operations, and also in inflammatory conditions of the peritoneum. At present there seems no adequate explanation as to why the intestines should be distended in some cases and the stomach in others, though most likely this difference depends upon differences in reaction to stimulation of different nerve ganglia.

I think that acute dilatation of the stomach, to some extent, is not so rare as supposed, and that if looked for all degrees of severity may be found between the slighter forms of dilatation, such as, for instance, are not infrequently noted in acute specific fevers, and the most severe and rapidly fatal cases such as I have described to-night. Treatment of the recorded cases seems to have been of no avail in checking the disease. The most obvious indication in these very severe cases is to relieve the distension of the stomach by means of a tube, but unfortunately, so far, this does not seem to have been followed by any permanent improvement, although it must be said that with the exception of one of Dr. Fagge's cases, in which temporary relief was produced, this mode of treatment does not seem to have received any extensive trial. All nutrition should be administered by the rectum, and the tendency to collapse met by hypodermic injections of strychnine. Some of the more serious symptoms are probably produced by the loss of the large quantities of fluid which are secreted, and this loss should be counteracted by injection of saline solution into the rectum or by transfusion. Lastly, it must be remembered that possibly on some occasions the condition may be a more general one than seems at first sight and that the dilatation of the stomach may be one of the local manifestations of general collapse.

Queen Anne-street, W.

[8] Cancer of the Stomach, p. 81.
[9] Text-book of Physic, Part II., p. 491.

[10] Paralysis of the muscular coat of the stomach limited to the pyloric portion, and preventing the propulsion of food into the duodenum, has been stated to be a cause of dilatation, and Dr. Wilson Fox ("Diseases of the Stomach," p. 215) quotes a case recorded by Andral where there was extensive ulceration of the pyloric region without obstruction and yet extreme dilatation of the stomach. Traube attributes such dilatation to destruction of the branches of the pneumogastric nerve.

THE ACUTE RETRO-PHARYNGEAL ABSCESS OF INFANTS.

BY S. VERE PEARSON, B.A., M.B., B.C. CANTAB.

THE acute post-pharyngeal abscess of infants is not a common complaint, but it is none the less important. This importance lies in the fact that if undiagnosed the case most frequently ends fatally. I have met with two cases of this disease in which tracheotomy was performed for supposed laryngeal diphtheria, one of which proved fatal; in the other, afterwards correctly diagnosed, the patient recovered. I can

relate two more fatal cases, both of which were admitted into hospital with, and died from, broncho-pneumonia secondary to an undiagnosed post-pharyngeal abscess which had broken down. In one case the condition was recognised before death, but the patient was already extremely ill and the post-pharyngeal tissues had sloughed. In the other case, which occurred at the earliest period of infancy at which I have known suffering from this complaint to be experienced—namely, seven weeks—the abscess was not discovered until the necropsy revealed it. Irving Snow,[1] who recently published three cases, makes a similar statement—viz., that retro-pharyngeal abscess unrecognised and untreated usually ends in death. And Blackader[2] says that the notable fact with which one is impressed on reviewing the literature is the frequency with which these cases remain undiagnosed or receive faulty diagnoses. Yet the diagnosis is not as a rule difficult. The disease is frequently overlooked because its occurrence is not thought of. When diagnosed the prognosis is fairly good. For these reasons, then, I feel that this article, dealing with a few of the striking features of some cases which came under my personal observation during 1900, together with one or two details of some additional cases treated at the Shadwell Children's Hospital during the year 1899, may not be without interest, and possibly, I hope, not without some practical result in leading to a less frequent oversight of a disease which, although admittedly not common, is not, I believe, so rare as is generally thought.

The text-books on the diseases of children briefly describe the symptoms likely to occur; hence it will be unnecessary to enunciate them fully. I will lay stress upon those of practical importance only. The common type of case presents the following picture. An infant under two years of age is brought, the complaint being that during the course of the last few days the child's voice has become gradually muffled, that there has been difficulty in sucking, or apparent pain on swallowing, that the child has been restless, has loss of appetite, and has been constitutionally ill. In addition to this it is remarkable in my experience how frequently these troubles have been preceded, or are actually accompanied, by a purulent nasal discharge. Very often at the time that the infant is first seen there is considerable obstruction to respiration, sometimes accompanied by much recession. Such a case may easily be mistaken for laryngeal diphtheria, especially when it is found that some glands in the neck are tender and enlarged, and upon examination of the throat the tonsils appear red and inflamed and possibly covered with a mucoid secretion. But it will be observed that the voice is different from that in acute laryngitis, and there is not that characteristic croupy cough so often present with laryngitis. Also on more careful examination it will be noticed that one side of the neck is fuller than the other, and when looking at the throat it may be noticed that one tonsil and the corresponding posterior pharyngeal wall may appear to be pushed slightly forwards. I say this may be noticed, for it is by no means generally easy to make sure of it in an infant's throat, always rather difficult to examine. But there is an easy method for certainly diagnosing this condition, and that is by digital palpation of the post-pharyngeal region. Too much stress cannot be laid upon the importance of making a digital examination in all cases where symptoms suggest such a condition. A very small amount of education is required in order to detect a small swelling and the most inexperienced can diagnose a well-marked abscess in this region. The only difficulty which arises is the difficulty of making sure that the swelling has true fluctuation. In one of my cases the swelling was fairly big and quite elastic to the feel, but subsequent events proved that it did not contain pus. It is said to be very rare for the swelling to become at all large without suppuration having occurred, and this has certainly been my experience.

There is no point with regard to etiology upon which I wish to lay any stress. It seems to be generally admitted now that the cause of the abscess is acute post-pharyngeal suppurative adenitis. The frequency of an associated nasal discharge is of interest in this connexion. I regret to say that I was unable to carry out bacteriological examinations in the cases which came under my care. In one case, however, I had a cultivation made from the nasal discharge and Klebs-Löffler bacilli were found. And in another case, referred to below, pus evacuated from the abscess underwent a bacteriological examination, the report of which was that "very plentiful chains of streptococci" were found. The cases with which this article deals are, of course, quite distinct clinically as well as etiologically from the chronic retro-pharyngeal abscess associated with spinal caries.

I now come to a very important part of the subject—namely, treatment. If the constitutional symptoms are slight and the swelling is small an expectant line of treatment should be followed. Under these circumstances the swelling may soon disappear, any local condition such as rhinitis having been attended to and a mild purge given. In all other cases, however, operative measures are indicated. Except in the worst cases immediate operation is not necessary. Very often an infant will be in a much better condition for operation by waiting for a short time, during which the swelling can be re-examined to see whether there is any chance of its being non-suppurative and subsiding. The only danger associated with this postponement is the possibility of an increase in the dyspnœa. Infants are liable to a sudden increase of any obstructive dyspnœa, and probably this is due to some spasm added to the primary cause. But my experience has been that not only is the constitutional condition of the patient better, but also the dyspnœa has become less marked, after about 24 hours' treatment; and this treatment should consist in the administration of a purgative and perhaps a simple saline mixture, careful feeding, together with a few small doses of brandy. If the dyspnœa is marked, and in any case, a steam kettle with a curtain over the head of the cot (not a steam tent) is useful, and a drop or two of antimonial wine added to the saline mixture often has the effect of counteracting the spasmodic element of the dyspnœa and easing the respirations.

Now as to the method of operating. I strongly advocate opening the abscess from behind the sterno-mastoid by Hilton's method. In an infant whose condition is already unhealthy it is extremely undesirable for him to swallow daily a certain amount of pus. It is impossible to teach an infant not to do this. And after operating through the mouth, however careful one is in irrigating the mouth and pharynx, it is impossible to prevent the swallowing of some of the purulent discharge which must persist for at least a few days. At the time of the operation it is of course possible by careful attention to the patient's position to prevent the pus from entering the trachea, when the abscess is opened through the mouth. This is a very real danger, considering the readiness with which a broncho-pneumonia is set up in such a patient, and it constitutes a very grave objection to that method of operating. And another objection is that these patients are always rather difficult to treat from the anæsthetist's point of view. It is undesirable in the case of either method to do without an anæsthetic, and the difficulties, and more particularly the dangers, are much increased, in my opinion, when the abscess is opened by the internal method—i.e., through the mouth. The actual operation in the case of opening the abscess externally is often quite easy and is generally not very difficult. Moreover, it seems to me that the after-treatment of cases treated by the external method is entirely satisfactory.

Now with regard to the operation itself there are one or two manipulative details to which I will call attention. The position of the incision should be immediately behind, and parallel to, the sterno-mastoid; its centre should be as nearly as possible on the same level as the centre of the swelling behind the pharynx, or a little below this. Towards the bottom of the wound the spinal accessory nerve must be avoided. Having used a knife to cut through skin and fascia, the posterior edge of the sterno-mastoid being carefully exposed and the muscle pulled slightly forwards, the knife should be abandoned in favour of a blunt dissector and a pair of dissecting forceps. By the time this stage of the operation has been reached it may have been necessary to remove one or two slightly enlarged glands situated behind the sterno-mastoid. From this time onward the operation consists in a careful separation of the structures until the prevertebral region is reached. The landmarks are the transverse processes and the plane of the anterior surface of the vertebral bodies. Keep well back, feel with the finger for these landmarks, and there will then be no danger of injuring the jugular vein or cervical sympathetic, the only two structures likely to be interfered with. The patient should never be at all deeply under, but at this stage of the operation he should be allowed to come round partially. Then matters are much facilitated by introducing one finger into the mouth and a finger of

[1] Archives of Pediatrics, January, 1901.
[2] Ibid., 1899, p. 80.

the other hand into the wound. By this means the exact limits of the abscess cavity can be made out. Then a fairly fine-pointed blunt dissector or similar instrument can be passed along the front of the finger in the wound and the abscess sac pierced. The pus flows out readily when the opening is made larger by means of a pair of sinus forceps guided into the cavity by the instrument already introduced. It is important to remember that the finger of one hand has been introduced into the mouth, and this should not touch the wound until it has been re-sterilised. Irrigate the cavity once or twice with some antiseptic solution. Then a very small drainage-tube should be introduced right to the greatest depth of the wound and perhaps a small strip of gauze around this superficially. One or two stitches are then put in to bring the edges together above and below the tube and an ordinary antiseptic dressing is applied. With regard to after-treatment there is nothing very much of importance. I have found it best to leave the small drainage-tube in for about 48 hours or three days, to irrigate the wound by gently syringing it with 1 in 4000 perchloride or biniodide solution for the first few days and after that with a weak solution of iodine. It is best to dress it twice within the first 24 hours of the operation, but after that once daily is sufficient. After the tube has been removed a very thin plug of gauze should be introduced and every other day slightly shortened. Some discretion is required in carrying out this detail; the point is to strike a mean result between getting a re-accumulation of pus and a long-lasting callous sinus. In my experience the latter error is by far the commoner. Some indication as to the rate of healing of the sinus is given by stating that in about three weeks from the time of the operation the wound should be healed. I feel sure that a rigorous attention to the details of antisepsis is one of the great aids in doing away with the formation of a callous discharging sinus.

In the following cases points illustrative of any peculiar difficulties which may arise will be emphasised. Otherwise only the briefest details of each case will be given.

CASE 1.—The patient was a male, aged four months; he had an abscess on the left side. Besides presenting most of the usual symptoms, including a purulent nasal discharge, he had considerable head retraction on admission and was very much cyanosed. The operation in this case was a very simple one, as the abscess was a large one and was found inclined to point not far beneath the surface just behind the sterno-mastoid. Recovery was the result, the wound being perfectly healed on the twentieth day.

CASE 2.—The patient was a female, aged six months; she had an abscess on the left side. Nasal discharge was present. The onset appears to have been somewhat gradual, it being stated by the mother that the patient had been ill for nearly a month. The chief complaint was that the infant had been liable to alarming fits of coughing with blueness. External operation was performed. Recovery ensued, the wound being quite healed on the fifteenth day.

CASE 3.—The patient was a male, aged two years; he had an abscess on the right side. He had been ill for a fortnight before admission. Nasal discharge was present, very profuse and purulent. External operation was performed. Recovery ensued, the wound being healed on the twenty-eighth day.

CASE 4.—The patient was a male, aged six months; he had a swelling on the left side. Nasal discharge was present. A few adenoid vegetations were also present. The small swelling disappeared without surgical treatment within a week.

CASE 5.—The patient was a male, aged 10 months; he had a swelling on the right side. In this patient Klebs-Löffler bacilli were cultivated from the purulent nasal discharge. There was rather more marked cervical adenitis present than in many of the cases. The expectant line of treatment was followed for three days, at the end of which time the swelling had become much larger and more elastic. But at the operation no pus was found. The operation was somewhat difficult for several reasons. The patient took the anæsthetic very badly and at one time suddenly stopped breathing and artificial respiration had to be performed. Also it was difficult to make sure whether or not a somewhat tense wall of the supposed abscess cavity had been pierced or whether the probe, the point of which could easily be felt by a finger in the mouth under the mucous membrane at the back of the pharynx, was tracking in the tissues immediately outside the capsule. In the end a sharp-pointed probe had to be used to make certain of this. This is the only case in which a sharp instrument was used. The temperature in this case, which in nearly all cases is considerably raised for a short time, ran a very irregular course, at times becoming very high (e.g., 106° F.). The child very soon afterwards developed broncho-pneumonia and died five days after the operation. During this time the swelling became considerably smaller. Throughout the patient took food so badly that he had sometimes to be fed by means of a nasal tube. At the post-mortem examination the diagnosis was confirmed, a small swelling was found behind the pharynx, but no pus, and extensive broncho-pneumonia. The case was acute; the onset was rapid, the history of illness and nasal discharge only dating from three days before admission. It seems probable that the whole disease, retro-pharyngeal adenitis and broncho-pneumonia, was secondary to an acute diphtheritic rhinitis.

CASE 6.—The patient was a male, aged 11 months; he had an abscess on the left side. There was no nasal discharge. External operation was performed. The patient was discharged cured, with the wound firmly healed, on the nineteenth day.

CASE 7.—The patient was a male, aged seven months; he had an abscess on the left side. Nasal discharge was present. External operation was performed by the house surgeon who preceded me at Shadwell. In this case the internal jugular vein was wounded and this necessitated ligaturing above and below. At the end of five weeks the patient was discharged constitutionally fit, but still with a small discharging sinus. This healed satisfactorily before very long, the child being watched as an out-patient.

CASE 8.—The patient was a female, aged 11 months; she had an abscess on the left side. There was no nasal discharge. External operation was performed; recovery ensued. This patient was operated on by the house surgeon who preceded me towards the end of February. She also left the hospital with a small discharging sinus, and at the end of May I had a note with regard to her case that the small sinus was still discharging and rather deep. I was about to make arrangements for the re-admission of the patient with a view to scraping the sinus, but somehow I lost sight of her. She disappeared from the out-patient department and so I presume the sinus must eventually have healed.

CASE 9.—The patient was a male, aged eight months; he had an abscess on the right side, but encroaching much towards the opposite side. Nasal discharge was present. This patient was originally admitted for laryngeal diphtheria. I had to perform tracheotomy on the night of admission. He was an extremely weak and wasted child and it seemed quite improbable that he would recover from the diphtheria. He did, however, but unfortunately his was one of those cases in which there is extreme difficulty in leaving out the tracheotomy tube. He was in the hospital for many weeks, during which time he was on several occasions on the point of death from spasmodic dyspnœa. Eventually he developed a nasal discharge and post-pharyngeal abscess in addition to his other troubles. This abscess was opened by the resident medical officer by the internal method. The patient recovered from this complication. In the end, however, he died from a dyspnœic spasm added to his marasmic condition.

The four undiagnosed cases referred to at the beginning of this article presented no further points of particular interest beyond those already mentioned. I will now add brief notes of eight more cases. These did not, like the preceding ones, come under my personal observation, but are cases treated at the Shadwell Children's Hospital during the year 1899.

CASE 1.—The patient was a male, aged seven months; he had a swelling on the right side. No note is made with regard to nasal discharge in this nor in several of the following cases; but presumably where none is mentioned no discharge was present. This was a weakly patient who had been ill for two months. For a short time previously to admission he had been refusing food. On admission there were swollen glands in the neck and a swelling in the right post-pharyngeal region. This subsided without operative treatment and the patient was shortly afterwards discharged cured.

CASE 2.—The patient was a male, aged one year; he had a swelling on the right side. He had been ill for 10 days; there had been a nasal discharge for one week. On admission the chief complaint made by the mother was swelling of the neck and difficulty in swallowing. The external operation was performed and a satisfactory recovery ensued.

CASE 3.—The patient was a male, aged three years; he had a swelling on the left side. This is the oldest patient of the series, none of the others being over two years old. The case also presented a more chronic form than is usual. Possibly it was of a tuberculous nature. The onset was gradual during 10 weeks. The child was well nourished. There was no rise of temperature. There were swelling, dyspnœa with recession, and stridor. The external operation was performed. A large collection of pus was found. The patient was discharged cured on the fourteenth day after admission.

CASE 4.—The patient was a female, aged one year; she had a swelling on the left side. She was very ill on admission. She had a very irregular and high temperature. Some broncho-pneumonia was diagnosed. External operation was performed but no pus was obtained. A few days later the patient died. At the post-mortem examination purulent meningitis, pulmonary collapse, and a sloughing post-pharyngeal wall were found.

CASE 5.—The patient was a male, aged two years; he had an abscess on the left side, the onset extending over two weeks. Difficulty in swallowing solids and some difficulty in breathing were complained of. The patient was a well-nourished child. External operation was performed. Recovery ensued and the patient was discharged to the convalescent home on the eighteenth day having only a superficial wound. The temperature in this case was never above 100° F.

CASE 6.—The patient was a female, aged 14 months; she had an abscess on the right side. She had had swelling of the neck for 10 days and dyspnœa for one week previously to admission. External operation was performed. The patient was discharged cured on the twenty-eighth day.

CASE 7.—The patient was a male, aged seven months. In this case there was also some suppurative adenitis of the cervical glands, so that at the operation (the external method was used) two distinct cavities were opened. The one behind the pharynx was, so far as could be made out, unconnected with that in the neck. The patient died the same night, the temperature rising just before death to 109° F. At the post-mortem examination broncho-pneumonia was found.

CASE 8.—The patient was a male, aged seven months; he had an abscess on the left side. Swelling and difficulty in breathing were present for four days previously to admission. He was a well-nourished child. External operation was performed. The pus contained "very plentiful chains of streptococci." Satisfactory recovery ensued. In this case a few days after the operation it was noticed that there was slight narrowing of the left palpebral fissure with contraction of the left pupil. The pupils reacted to light. This condition passed off in about a week.

I am greatly indebted to Mr. R. W. Parker and Mr. L. A. Dunn, surgeons to the East London Children's Hospital, for their kindness in allowing me to make use of those of their cases which came under my own observation and treatment during my term of office as house surgeon to the hospital, and also for leave to abstract a few details from the notes of some cases which were treated at the hospital in 1899.

Brompton Hospital for Consumption, London, S.W.

A CASE OF COMPOUND FRACTURE OF BOTH JAWS.

BY H. WEIGHTON, M.B., C.M. EDIN.

IN June last a young man in descending a steep hill on a bicycle without an efficient brake lost control of the machine, and being unable to round the turn of the road at the foot of the hill was thrown with great force against a stone pillar. He was found at once by a passer-by and was removed to his home, luckily no great distance from the scene of the accident. On examination shortly afterwards the lower part of his face was found to be much swollen but it presented no external wound. There was a complete fracture of the lower jaw near the symphysis and also a detachment of a part of the alveolus in front containing three teeth. There was likewise a fracture of the upper jaw at each side in the region of the canine teeth, but with little displacement or deformity. The whole premaxilla could be easily moved about. He suffered also from slight concussion which, however, passed off in a few hours. The fractures were treated temporarily by means of wire between the teeth on each side, the whole being fixed with an external poroplastic splint fitted to the chin and a four-tailed bandage. Next day I procured the assistance of Mr. H. P. Friend, surgeon dentist, who took a mould of both upper and lower dental margins and constructed an inter-dental gutta-percha splint. A hole was made near the centre of this, through which the patient could be fed. This after manufacture was found to fit very exactly, and the teeth were fixed in the sockets of the splints by means of a lining of soft gutta-percha. The poroplastic cap was reapplied to the chin and fixed in was position by means of a piece of elastic bandage carried over the head. The patient was fed on milk, beef-tea, &c., through a piece of tubing, and the whole mouth was rinsed out very frequently with dilute Condy's Fluid. With a little practice the patient was able to drink out of a cup or tumbler in the ordinary way without much difficulty. After five weeks' time the splint was removed and the fractures were found to be firmly united, with the exception of the fractured alveolar margin of the lower jaw, which ultimately became a sequestrum and had to be removed. The patient is now able to take ordinary food and there is no outward deformity.

Incidentally the patient brought to my notice soon after the removal of the splint the fact that in swallowing liquids a small quantity always regurgitated through the nose. This on examination was found to take place from a small fissure running antero-posteriorly in nearly the centre and near the posterior edge of the hard palate. It is about half an inch long and in width it just admits the ordinary surgical probe. How this complication has arisen it is somewhat difficult to imagine, and it is rather curious that it should make itself manifest just five weeks after the accident. It is almost certain that no foreign body could have penetrated the roof of the mouth at the time of the accident. A probable explanation may be found in the fact that a fracture of the hard palate had occurred which for some reason had not united at this spot, thus leaving a fissure in the bone. It is then possible that the soft structures over the fissure would become split during the healing process of the bone, and a complete communication between the mouth and nose become established.

Barnard Castle.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF URTICARIA FOLLOWING IMMEDIATELY ON WASP-STING.

BY T. WILSON PARRY, M.A., M.B. CANTAB., &c.

IN the late afternoon of Sept. 4th, 1901, I was summoned urgently to the case of a boy, aged 15 years, who had been stung by a wasp, and, my messenger added, "it was flying all over him." Being accustomed to eccentric messages from excited villagers who are anxious about their sickly friends I paid little heed to the nature of the message, though, of course, going at once to see the patient. I found him lying in bed with a red face, swollen lips, and much swelling, too, below the eyes. He was scratching himself with great vehemence and an examination of his trunk, arms, and legs revealed as typical an urticaria as one could ever wish to see. The history of the case was as follows. He had just finished his tea and was washing his hands when a wasp, which was in a somewhat lethargic condition, dropped into his basin and stung him on the ring finger of the left hand. Before he had finished his ablutions he was obliged to run to the closet so that he might be able to scratch himself to his heart's content, as he told me his whole body was in a terribly irritable condition. While examining him he complained of sickness and immediately vomited the contents of his tea. His temperature was 96·8° F. and his urine, which he passed about two hours after, was loaded with phosphates and contained also a trace of albumin. I gave him a simple mixture of salicylate of soda, carbonate of

soda, and bismuth, and the following morning the rash had entirely disappeared and, with the exception of the swollen finger that had been stung, he felt himself ready for his work again.

Two points of interest seem to attach themselves to this case. Firstly, from both personal observation and also from reference to the literature on the subject it would appear that general eruptions are exceedingly rare after wasp-stings; and secondly, the suddenness of the onset of the rash after the sting had been inflicted is also peculiar and seems to be indicative of a hypodermic injection of some toxic substance which might have been imparted with the sting. May it not be within the range of probability that there is in existence an urticaria-producing bacillus which may take its place among those myriads of bacilli which, though at present "undiscovered," are markedly suspected of being the causation of certain so-called "idiopathic" affections?

Youlgreave, Derbyshire.

A CASE OF TOBACCO-POISONING IN A CHILD.

By JOHN HAWKES, M.D. ST. AND.

ON Sept. 4th, about 6 P.M., a child was brought to my house by her father and mother who stated that she had just taken a "deadly poison" but of the nature or description of the poison they could tell me nothing. She was two years old, of good physique, and was well nourished. Her face was flushed, her body was very warm, and her pupils were dilated to about twice their natural size. She was unconscious and entirely free from pain; her limbs were flaccid and her pulse was small and weak. Her parents, intelligent persons, were profoundly agitated. I at once administered an emetic of one drachm of ipecacuanha wine in half an ounce of water and despatched the father to procure the vessel containing the poison which she had taken, following up the emetic with small draughts of warm water, which procured emesis in about 10 minutes, the quantity of fluid vomited being about a teacupful and consisting apparently of tea. The man meanwhile returned with a half-gallon tin labeled "Poison" and containing a strong decoction of tobacco which he used in his business as a horticulturist. He also brought a pannikin of a dark viscid fluid of the consistence of treacle into which the child had dipped her fingers and then placed them in her mouth. She was still unconscious and had passed a liquid motion. I accompanied her home and in about an hour the pupils regained their normal size and the warmth of the body and the flushing of the face had sensibly diminished. I then administered a few drops of brandy diluted with water, having previously given some warm milk which she retained. About this time she faintly recognised her mother and recovered slight consciousness; in another hour she was rather more improved and was apparently sleeping when I left her, with instructions for the milk to be continued through the night and a little brandy to be given if any signs of coldness or collapse ensued. She passed a tranquil night and on the next morning I was gratified to find her completely recovered and playing about in her usual health.

Tobacco poisoning, though not rare in adults, is, I believe, very unusual in so young a child. Its first action, according to Sir Benjamin Brodie, is on the heart; secondarily, it causes convulsions and insensibility of the pupil. These were absent, but the mother noticed that in shifting the child the little one was quite limp. Probably the quantity taken was not sufficient to cause any more serious symptoms.

Shanklin, Isle of Wight.

CARDIFF INFIRMARY.—The new women's ward at the Cardiff Infirmary was opened on Oct. 15th. The ward contains 16 beds and it is estimated that the cost of maintenance will be £800 per annum. The necessary funds have been contributed by the ladies of Glamorganshire.

LLANDRINDOD WELLS.—The resident population of Llandrindod Wells has been doubled in the last 10 years and at the last census included 1828 persons. The medical officer of health (Dr. S. G. Floyd) reported to the district council on Oct. 11th that it was nearly six months since a resident had died and that there was a complete absence of infectious disease in the district.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

HIGH WYCOMBE AND EARL OF BEACONSFIELD MEMORIAL HOSPITAL.

A CASE OF PERFORATED GASTRIC ULCER; OPERATION; RECOVERY.

(Under the care of Dr. HUMPHRY J. WHEELER.)

IN the following case of successful suture of a perforated gastric ulcer about 26 hours had elapsed between the perforation and the operation, so that the recovery is more noteworthy. The empty condition of the stomach at the time of rupture was favourable. Another element in the prognosis frequently does not receive sufficient attention: this is the variety of microbic infection of the peritoneum which has occurred. It would be well if in all cases of operation for perforated gastric ulcer a bacteriological examination of the peritoneal contents were made. The question of the value of absence of the liver dulness in the diagnosis of perforation of the stomach or intestine is important. Stress was first laid on this point by Flint, and many others have subsequently insisted on its importance. Yet it is very doubtful if it is of any real value. Liver dulness may be present and yet perforation may have occurred, as in the case recorded below, and, on the other hand, the liver dulness may be absent although there has been no perforation. When other signs point markedly towards perforation absence of the liver dulness will serve to confirm this opinion, but if the other signs are indefinite it is well to place no reliance on the dulness over the liver.

A domestic servant, aged 19 years, was admitted into the High Wycombe and Earl of Beaconsfield Memorial Hospital at 4.30 P.M. on July 31st, 1901. The patient's father was living and in good health; her mother died from cancer. The patient had two brothers who were strong and well and one sister who suffered from spinal disease. The patient herself had been delicate since childhood and had suffered for a year from anæmia and dyspepsia for which she had been under treatment for five months, her symptoms being epigastric pain and tenderness, aggravated by food, occasional attacks of vomiting, constipation, and amenorrhœa. She had no hæmatemesis, but she had noticed that her stools were sometimes very dark, "like ink." On July 27th the epigastric pain was worse; she saw her medical man who prescribed for her, but she obtained no relief. On the 30th she had a meal at 4 P.M. consisting of tea, bread-and-butter, and currant bun. At 7.30 P.M. she was hanging some clothes on a line when she was suddenly seized with acute pain to the left of the umbilicus which radiated through to the back and upwards to the epigastrium. Dr. Wheeler saw her at 8.30 P.M. and found her doubled up with pain. Her pulse was weak and 84, the tongue was clean, and the temperature was 99° F. Her abdomen was tender all over, especially at the epigastrium, and was tympanitic. The liver dulness was not diminished. Her bowels had acted imperfectly on the 27th. There was no vomiting. She had been given whisky-and-water and brandy-and-water which increased the pain.

The patient's appearance suggested perforation, but Dr. Wheeler did not consider the symptoms conclusive in view of the normal area of liver dulness. He prescribed 10 minims of liquor morphiæ, two minims of dilute hydrocyanic acid, and five grains of bicarbonate of sodium to be given every four hours. He saw her the next morning at 10.30 A.M. She had passed a very bad night; the abdominal pain was excruciating and was aggravated by some spoonfuls of milk-and-soda which she had taken during the night and by a dose of castor oil administered by her step-mother in the morning. The abdomen was rigid, tympanitic, and very tender all over. The pulse was 126 and the temperature was 102°. The tongue was somewhat coated. Perforation

was diagnosed and her speedy removal to hospital was advised. A quarter of a grain of morphia was administered hypodermically and was repeated at 3.30 P.M. just before her removal. The journey of three miles to hospital gave rise to great pain and some collapse which caused a delay in performing the operation. A simple enema was administered which acted. At 9.30 P.M. the patient was placed under chloroform by Mr. J. G. Cort, which she took well.

An incision was made in the median line from one inch below the tip of the ensiform cartilage to one inch above the umbilicus. On opening the peritoneum it was seen to be inflamed. The stomach, which was very much distended, bulged forward and was seen by transmitted light to be empty. The transverse colon and omentum also protruded from the lower angle of the wound and gave rise to some difficulty. The peritoneal cavity was moderately full of semi-opaque fluid, but no gas or foreign material was detected. The exposed anterior surface of the stomach was carefully searched but nothing was found. On raising up the liver it was found that the under surface of the left lobe was adherent to the stomach by recently effused lymph; the adhesions were easily separated and the adherent portion of the wall of the stomach was seen to be puckered and thickened, but no perforation was seen. On passing a probe down one of the sulci it passed into the organ but no gas escaped. The stomach was carefully searched in all directions but no further signs of perforation were discovered. The edges of the puckered portion were then brought together with fine silk Lembert sutures which held well. The peritoneal cavity was carefully sponged dry and all visible lymph was removed, and the colon, omentum, and stomach were returned with some difficulty on account of their distension. A drain of iodoform gauze was inserted under the liver and was brought out at the middle of the incision. The peritoneum was next sutured with fine catgut; the abdominal walls were then brought together with deep and superficial silk sutures. The wound was dressed with sublimate gauze and wood-wool, which were kept in place by a many-tailed flannel bandage. The patient had a good pulse throughout and stood the operation, which lasted about an hour, very well. On recovering from the effects of the anæsthetic at 1 A.M. she retched a little and complained of pain. A quarter of a grain of morphia was injected and she was given a nutrient enema of beef-tea and brandy. She passed urine naturally. The nutrient enemata were repeated at 4 and 10 A.M., and another hypodermic injection of a quarter of a grain of morphia was given at 6 A.M.

On August 1st, at 11 A.M., Dr. Wheeler found the patient looking better but complaining of great abdominal pain. The wound was dressed and looked well. The abdomen was very much distended and tympanitic. Half a grain of morphia with one-hundredth of a grain of atropine was given hypodermically. The patient passed a quiet day. Nutrient enemata were given at 12, 2, 4, and 8 P.M. The mouth was rinsed out occasionally with hot water. At 10 P.M. the patient was found to be in pain again, so the morphia and atropine injection was repeated. Nutrient enemata alternately with nutrient suppositories were continued every two hours during the night. On the 2nd the patient was found to have passed a fairly good night, but she still had a great deal of abdominal pain. Chloroform was administered and the wound was dressed, the gauze drain was removed, and the aperture in the wound was sutured with silk; the wound looked well but the abdomen was still tympanitic. On recovering from the anæsthetic the pain returned and the hypodermic injection of morphia and atropine was repeated. Nutrient enemata were continued as before and the mouth was rinsed with water. The hypodermic injection of morphia and atropine was repeated at 10 P.M. The patient passed a comfortable night during which she had two loose evacuations, passing the remains of the currant bun eaten on July 30th. On August 3rd a starch and opium enema was given at 11.30 A.M. to quiet the bowels. The patient was decidedly better; the pulse had fallen to 90 and the temperature to 100°. She passed a good day and sucked ice at intervals. Nutrient enemata were given as before. She had a morphia and atropine injection at 10 P.M. There were two more loose actions during the night; the starch and opium enema was repeated at 4 A.M. On the 4th she was very comfortable. Nutrient enemata and ice by the mouth were given as before. She had a morphia and atropine injection at 6 P.M. During the night she had six drachms of Valentine's meat juice. On the 5th she seemed to be stronger: she had a tenspoonful of Valentine's meat juice and whey at intervals. The bowels were loose. Nutrient enemata were given as before. She had a morphia and atropine injection at 10 P.M. She passed a good night. Valentine's meat juice and whey (three drachms at a time) were taken by the mouth. She had nutrient enemata as before. On the 6th she was progressing most favourably; the abdominal pain and distension were much better. 11 ounces of fluid (Valentine's meat juice and peptonised milk) were taken during the day. She passed a good night but had slight bilious vomiting at 6 A.M. and 9 A.M. On the 7th she was given dilute hydrocyanic acid (three minims in half an ounce of water) every three hours. There was no more sickness. The patient's further progress was uninterrupted. The wound was dressed on the 8th and again on the 12th, when the stitches were removed, the wound having healed by first intention except at two points, where there were some small granulations. Solid food was given gradually with Benger's food and cornflour, followed by fish and minced chicken. She got up on the 21st and left the hospital for a convalescent home on Sept. 20th with the wound soundly healed and feeling and looking better than she had done for months. During the last three weeks of her stay in the hospital she was taking five grains of citrate of iron and ammonium, ten grains of bicarbonate of sodium, and chloroform water to one ounce three times a day.

Remarks by Dr. WHEELER.—The operation for the relief of perforated gastric ulcer is yet sufficiently recent to justify, I think, the publication of this case. It presents also some unusual symptoms which appear to me to be worth recording. The non-obliteration of liver dulness and the moderate amount of shock led me at first to doubt whether I had to do with a case of perforation. The reason for this was evident when the abdomen was opened—there were no signs whatever of gas in the peritoneal cavity. The perforation must, I take it, have been very minute and possibly valvular, and being situated just under the liver was almost immediately inclosed by adhesions. The stomach, too, was most likely empty, as quite three hours had elapsed since food was taken; at the time of operation it certainly contained nothing but flatus. It was fortunate that the coats of the stomach afforded a good hold for the stitches; in a case which I saw in the practice of a colleague very great difficulty was experienced from this cause and they gave way after a few hours. The peritoneum was not flushed as I concluded that the amount of contamination was not great, and the intestines being so much distended a thorough flushing would have been a matter of great difficulty, but all the accessible parts of the cavity were carefully dried and freed from lymph. It only remains for me to express my thanks to my friend and colleague, Mr. L. W. Reynolds, for his valuable assistance at the operation, at which Mr. G. D. Bannerman and Mr. Turner were also present and rendered aid. To Mr. Cort my warm acknowledgments are due for his skilful administration of chloroform and for his assistance in the after-treatment of the case.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Acute Dilatation of the Stomach.

A MEETING of this society was held on Oct. 22nd, Dr. F. W. PAVY, the President, being in the chair.

Dr. H. CAMPBELL THOMSON read a paper on Acute Dilatation of the Stomach, with Illustrative Cases, which will be found printed in full at p. 1113 of this issue of THE LANCET.

Dr. T. R. BRADSHAW (Liverpool) thought that the most obvious explanation of these cases of acute dilatation was that they were due to obstruction at the pylorus. He failed to see how, if the dilatation were due to disturbance of the nervous mechanism, vomiting could occur, for without the active contraction of the walls of the stomach the fluid could not be expelled, and he also thought it probable that the fluid would escape through the pylorus unless there were obstruction. Another point again in favour of the view that there was obstruction at the pylorus was that in all the cases

mentioned in the paper the intestines below the pylorus had been collapsed. He mentioned the case of an elderly woman who on three different occasions had had attacks of sudden dilatation of the stomach, and in each of these relief had suddenly occurred. He attributed the sudden distension and rapid relief to a kink having taken place in the region of the pylorus.

Dr. W. P. HERRINGHAM criticised Dr. Thomson's explanation of the cause of the acute dilatation. He said he could understand paralysis of the muscular coats and the secretion of fluid which was unable to pass out distending the stomach, but he failed to see how the stomach would distend against the pressure of the abdominal walls unless there was some such agent at work. He pointed out that in all Dr. Thomson's cases the stomach was distended with gas, which must have been produced within the stomach, and this in association with the paralysis of the muscular walls was the cause of the dilatation.

Dr. ARTHUR VOELCKER said that the occurrence of dilatation of the stomach in conjunction with left-sided pleurisy accounted for certain physical signs which were often present —viz., the high level of the resonance which might occur at the base of the left lung. He thought that against the view that the condition was due to pyloric obstruction was the fact that bile had been present in the vomit of two of the patients. With regard to the treatment he hesitated to advise that the stomach should be washed out, especially in those cases in which the condition of the patient was critical.

The PRESIDENT said that he viewed the stomach in exactly the same way as any other hollow viscus, and as the bladder became dilated and lost its power of contraction when an obstruction interfered with the evacuation of its contents, so the stomach became dilated when the pylorus was obstructed. He agreed with a former speaker in believing that it was impossible for an active dilatation of the stomach to take place. Two conditions were necessary to give rise to the dilatation: the first was atony or paralysis of the walls of the stomach, and the second was the expansion of the organ by fluid or gas within it. He referred to certain experiments on dogs in which both vagi had been divided, and it was found that the lower end of the œsophagus was enormously distended with food which the dog had swallowed shortly before its death. In this case there was paralysis of the fibres of the œsophagus and dilatation by means of the food swallowed.

Dr. THOMSON, in reply, said he did not believe there was any obstruction at the pylorus, for no peristaltic contraction had been observed. He mentioned the heart as an instance of a hollow viscus dilating actively. He quite agreed with the President that the two factors he mentioned were necessary to produce the acute dilatation of the stomach.

OPHTHALMOLOGICAL SOCIETY.

Presidential Address: Some Clinical Experiences of Primary Chronic Glaucoma and the Value of Iridectomy.—Rodent Ulcer of the Cornea in a Child.—Exhibition of Cases.

THE first ordinary meeting of the session of this society was held on Oct. 17th, Dr. DAVID LITTLE, the President, being in the chair.

The PRESIDENT, after expressing his appreciation of the honour conferred upon him by election to the chair, proceeded to relate his Clinical Experiences of Primary Chronic Glaucoma and the Value of Iridectomy. He alluded to the unanimity of the profession in regard to the performance of iridectomy or sclerotomy well back in the corneal margin, as the only means by which hope of remedy was to be obtained, referring to the work of Brailey, Priestley Smith, Nettleship, and Collins in the pathology of glaucoma as substantiating this view. The series under review consisted of 40 cases in which he had made a long incision far back in the sclero-corneal junction, sometimes with and sometimes without removal of the iris. He considered that iridectomy was the more trustworthy procedure and he now adopted it as the primary operation, renewing the incision if subsequently necessary at the same spot. There was considerable difficulty in keeping patients under observation afterwards and the necessity for this in judging of the value of treatment was obvious. Among hospital cases from 1886 to 1894, excluding those in which the notes were imperfect, he found 67 miscellaneous instances of glaucoma; 11 patients had died, leaving 56, and of these 37 were traced. Ten—that is, close on one-fourth—had become totally blind, eight from atrophy of the nerve without increase of tension and the other two from atrophy of the globe and recurrence of glaucoma respectively. Vision had deteriorated from atrophy of the nerve in four and the remaining 23 showed no great change. Some were a little better and others were a little worse than at the time of the operation, but for the most part they remained stationary—that is to say, 62 per cent. held their ground 13 years after operation. All except one preserved a normal tension and three maintained a low standard of vision, Jaeger – 19 and 20, present before operation—practically hopeless cases. In advanced chronic glaucoma with marked reduction of vision the operation reduced tension permanently, but blindness was threatened in many by atrophy of the nerve. Few cases were traced after 12 years. Among cases in private practice three could be traced for a longer period. One man operated on 24 years ago (1877) at the age of 40 years still retained vision = $\frac{6}{9}$ and normal tension in the right eye, the left having been lost through glaucoma four years earlier. In another the vision had been slowly contracting for three years. The disc was pale and excavated, but central vision = $\frac{6}{9}$. A third patient after 19 years preserved normal vision and tension. Eight others could see well after from 10 to 15 years. As regards acute glaucoma the President recalled one patient who lost one eye in 1870 and a week later suffered with this disease in the other; iridectomy was performed hurriedly at midnight and the eye was saved, normal vision being retained 27 years after. Three others were well after 20 years, and a fair number from 10 to 15 years after operation. For the most part sight remained stationary for some years and then failed in the periphery, the progress being gradual at first. Simple cases formed only a small proportion. The President regarded treatment by myotics as useless and recommended operation in all cases of simple glaucoma, early or late, if there was any vision left. In some the operation failed to check the progress of the disease; in others its development was retarded, even at the age of 70 years. Many failures could be traced to faulty operation; an incision too far forward was worse than useless. At all times the procedure was difficult and the greatest precision was needed. In the early stage pressure symptoms were often overlooked, but where the other eye had been lost they naturally frightened the patient, and such cases came under operation satisfactorily. In three such cases under the President's care obscuration occurred with tolerable frequency. The coloboma resulting from operation did not affect the acuity of vision or the power of accommodation. He did not advise operation for pains in the temples, but where one eye was already blind and the second was threatened by premonitory symptoms and obscuration, the operation should be performed at once. The premonitory stage was most favourable for iridectomy, as von Graefe taught. Eserine and pilocarpine might diminish the attacks and retard the disease, but did not effect any real cure and the disease eventually became acute or chronic. Cases operated on early showed no recurrence of symptoms or obscuration. The iridectomy then might be of moderate size and did not need to be so far back as in the more advanced cases; a keratome should be used and the attachment of the iris should be removed. In conclusion, the President said that there was too much blindness from glaucoma, which might be prevented if early operation was more general. Confidence in this proceeding was increasing rather than diminishing.—Mr. E. NETTLESHIP moved, and Mr. A. QUARRY SILCOCK seconded, a vote of thanks to the President for his address in a few appreciative words and this was accorded with acclamation.

Mr. S. JOHNSON TAYLOR read notes of a case of Rodent Ulcer of the Cornea in a Child, aged three years, who had been previously ailing for several weeks. The disease developed and extended during the last three weeks in March until the upper one-third of the cornea was involved by superficial ulceration, the free edge being grey and the sclerotic aspect vascular. There were at first lacrymation and photophobia, with hyperæmia of the lids. At this stage the ulcer was freely scraped and treated with liquid carbolic acid, a pad and bandage being subsequently applied. Quinine lotion, four grains to the ounce, was instilled. By the middle of April the ulcer had healed. This was an instance of Mooren's ulcer, the progress and cure being the more rapid, as it was extremely rare in a child. There was no hypopyon or perforation. It was not malignant and it represented a clinical entity due to a specific germ. As it traversed the cornea it

left a nebulous condition behind it.—Mr. G. LINDSAY JOHNSON referred to the greater frequency of this disease in carnivora and rodents.—Mr. NETTLESHIP remarked on the absence of relapse.

The following cases were shown:—

Mr. R. MARCUS GUNN: Persistent Double Keratitis, mainly Superficial, without Tendency to Ulceration.

Mr. LINDSAY JOHNSON: A case of Deep-seated, Infective Conjunctivitis of an unusual character.

Mr. SYDNEY STEPHENSON: A case of Congenital Distichiasis.

Mr. E. TREACHER COLLINS: A case in which Mooren's Rodent Ulcer had six years previously involved the whole Surface of each Cornea.

Mr. N. BISHOP HARMAN: (1) Choroidal Angiosclerosis, with Pigmentary Degeneration (two cases); and (2) a case of Paresis of the Third Nerve in which on Lifting the Drooping Lid there was Coincident Drooping of the Sound Lid.

Mr. G. W. ROLL: Congenital Patch of Pigmentation in the Fundus Oculi.

Mr. L. V. CARGILL: Sclero-corneal Dermoids in Both Eyes.

Mr. SILCOCK: Primary Chancre of the Eyelid in an Infant.

HARVEIAN SOCIETY OF LONDON.

Hæmaturia in Childhood.

A MEETING of this society was held on Oct. 17th, Dr. D. B. LEES, the President, being in the chair.

Mr. CAMPBELL WILLIAMS read a short paper entitled Hæmaturia in Childhood. In many cases, owing to the obvious presence of disease with which hæmaturia was apt to be associated, the etiology, source, and prognosis could be fairly accurately given at once. In others, though the source of the hæmorrhage might be evident, the causation was obscure and judgment had to be withheld for at least a time. The various medical ailments, drugs, and parasites which gave rise to the condition were enumerated. The surgical aspect was next reviewed. Traumatism of the kidney, ureter, bladder, and generative organs was discussed. In connexion with laceration of the ureter mention was made of a case of hydronephrosis following the injury which necessitated nephrectomy. The effects of calculi in the various portions of the urinary tract were gone into. It was remarked that in many proved cases of vesical calculus in young children hæmaturia was absent and that the only diagnostic signs had been dysuria and infrequent micturition; also that frequency of urination was more common in infants when the stone was renally situated. The value of skiagraphy in these cases was pointed out. Tubercle of the bladder and kidney was dealt with and attention was drawn to the fact that the first noted symptom of renal tuberculosis might be copious hæmaturia. In connexion with phimosis as an exciting cause of vesical hæmorrhage Mr. Williams remarked that he had never met with hæmaturia due to phimosis uncomplicated with some other cause. Reference was made to sarcoma as the type of malignant disease which affected the urinary organs in infancy and childhood, but that the bladder was practically exempt from implication by it in the very early years of life. Also the fact was noted that, excluding sarcoma, the bladder was little liable to tumour formation. The rarity of papilloma, mucous polypi, and adenomata was pointed out. Caruncle of the urethra in female children was noted as an occasional cause of blood in the urine. Hæmaturia dependent upon scurvy rickets the result of improper feeding was discussed and attention was drawn to the fact that sometimes bleeding from the urinary organs might precede the usual osseous or oral manifestations of the disease. It was likewise pointed out that in hæmophilia hæmorrhage from the bladder or kidneys might constitute the primary declaration of this dyscrasia in a child.

Dr. SYDNEY PHILLIPS remarked that hæmaturia arising from tuberculous disease of the urinary organs, especially when the kidney was affected, might be very profuse. He had not seen hæmaturia in scarlet fever except as part of an acute nephritis. In a patient suffering from typhoid fever and scarlet fever at the same time fatal hæmaturia had occurred and was shown post mortem to have occurred from the bladder wall. In children it was not infrequent to find hæmaturia which seemed attributable to the mechanical action of oxalates or of uric acid found in the urine. He thought that hæmaturia and epistaxis might result from the rheumatic poison.

Mr. BUCKSTON BROWNE referred to the completeness of the paper and said that he could only think of one source of hæmaturia in children which had not been mentioned—namely, the bursting into the bladder of an abscess connected either with the hip or the spine; and he instanced a case where he had removed part of the body of a vertebra from the bladder into which it had been discharged from a spinal abscess. He also mentioned a case of infantile hæmaturia seen with Sir Thomas Barlow where the cessation of the use of sterilised milk and the taking of a little orange juice were followed by excellent results.

Dr. G. A. SUTHERLAND agreed with Mr. Williams that hæmaturia did not occur in uncomplicated rickets. In scurvy hæmaturia might occur from renal or vesical hæmorrhage and was directly dependent on the general disease. In some cases, however, he thought that a local cause existed in the form of mechanical irritation of the kidneys by uric acid crystals. These were frequently passed in large amount in scurvy, as in most affections characterised by profound anæmia, so that if hæmaturia was the sole evidence of the hæmorrhagic tendency during an attack of scurvy it was advisable to examine the urine carefully for uric acid.

LIVERPOOL MEDICAL INSTITUTION.

Opening Address of the Session by the President.

THE opening meeting of the session was held on Oct. 10th, when Mr. EDGAR A. BROWNE, the President, delivered the opening address, of which the following is an abstract.

After some prefatory remarks bearing on the work of the Institution the President said: To those who live in the midst of the most remarkable achievements of the intellect the conditions of mental progress must be a fascinating subject, from whatever side approached. Whether we give ourselves up to mere wonderment, or to a picturesque enumeration of recent triumphs; or whether we endeavour to analyse the causes, the evolution, and the development of modern ideas; whether we take a historical view of the past or endeavour to cast a horoscope of the future; whether regarded merely as an intellectual amusement or as a practical guide for the organisation of our medical schools, or even as a help for the improvement of our own minds, the interest of a general view of progress is likely to appeal to everybody. All travellers like occasionally to pause and to view the road they have traversed and to examine the map of where they are going. It would be wrong to take a survey of medical progress in a mere parochial spirit; our survey must be wide. We do not stand alone. There is no medical science, properly so-called; we are tied and bound by the condition of the collateral sciences on which we depend. We are opportunists, in the midst of our more precise brethren, taking from them what will serve our turn. But though we have no science we may claim a scientific method which in its way is exact and productive of good results. The art of the practitioner must be distinguished from his science; his knowledge of the details of other sciences from his appreciation of what his own science requires. If we could carry out to its logical conclusion the scheme of a modern preliminary examination—e.g., the matriculation of London—we should be, not physicians, but scientists. The more exact a science the less room for the exercise of art, and it is a union of the methods of scholarship and science with the personal skill in dealing with the half-seen and the obscure in clinical work that makes the practice of medicine so fascinating. But arts tend to be lost, and though science is more stable, not only sciences but civilisations themselves have disappeared. The Egyptians have gone. Their learning was sufficiently profound to command the respect of the Greeks, but it has vanished. The modern Greeks are a brave and intelligent people, but they have not a tincture of the old civilisation—theirs is French. The possibility that modern science may be destroyed must be admitted; therefore the mode in which the torch of learning is kept burning or becomes extinguished is full of interest. There is nothing to show that in historical times the individual brain-power has increased; the power of using it has. The increased power due to coöperation is enormous. We can only judge of the past by the remains of literature and architecture, and by those tests the ancient civilisations were raised by men fully our equals. The mental endowments of men have always been in three classes—men of genius, of talent, and the mediocrities. There is no sharp line of demarcation, as the characteristics may even be shown in the same individual under different circumstances. Genius can scarcely

be defined, as it is manifested in many various ways. In relation to science it means the possession of faculties especially adapted for the work to be done. A man of genius may be supposed to have a feline quality of vision, able to pierce the surrounding gloom of ignorance earlier than others; hence have sprung the ideas which lie at the foundation of progress. Genius, however, is not always of itself efficient, and the great value of the men of talent is as interpreters. They are capable of appreciating genius, of seizing the gist of new ideas, and of bringing them into touch with the knowledge of the times. The mediocrities of themselves do not appreciate genius, they like it diluted; they herd together, they have their shibboleths, they distrust originality, singularity, or independence of thought. Thus they maintain the atmosphere of any art or science they may be connected with. They profit most by education, and they serve the practical purpose of diffusing and applying the knowledge afforded them by the men of talent. Now, if we fail in educating the mediocrities sufficiently for them to appreciate the teaching of the more active minds the progress of knowledge is arrested, and science fails for want of diffusion. If genius fails on the other hand, there is little use for the man of talent, and under such conditions science may dwindle and even become lost. The inventive and research capacity of the Chinese must at one time have been considerable, but knowledge has not moved with them for 2000 years; they have settled down to a vast population of mediocrities occupied incessantly in passing examinations or examining others more mediocre than themselves. Appalling as the thought may seem, the possibility of the same thing occurring to ourselves, if our educational machinery becomes too complicated and tyrannical, is not wholly chimerical. Moreover, a great discovery may be made and become public, but from a want of sufficient collateral knowledge may not only fall flat and be useless, but may even become positively detrimental; take, for example, the familiar discovery of the circulation of the blood. There are various interesting points connected with the state of knowledge at the time it was made. Why was it not made before? First, it needed the establishment by Bacon, the protagonist of scientific thought in this country, of the inductive philosophy on the ruins of the ancient authority, especially that of Aristotle. Bacon found the physicians great offenders. He had a poor opinion of them; he said they reasoned in a circle, and doubtless he was right. But he gave them a serviceable map of the country. He said, "Look the facts in the face, form your own opinions, never mind the ancients." Until that method was accepted as the working method the passage of the blood through the arteries was not likely to be investigated, because the latter were supposed to be air-passages. A few advanced thinkers knew that some blood was mingled with the vital spirits, but no connexion with the veins was generally accepted. The liver, not the heart, was the prime motor, and when a thing was believed and was obvious on superficial examination it took an original mind to look below the surface. Then it was a very unmechanical age. People did not concern themselves with the body as a machine—it was a vital organism and a marvel, and not to be too rudely examined either. Then the collateral sciences were not ready. Oxygen was not discovered for more than 150 years. Before oxygen was discovered the knowledge of the mere paths of the circulation was no good, so instead of seeing that the central fact about the circulation was its connexion with respiration, and accounting tentatively for the existence of the pulmonary tract, attention was merely confined to the movement of the blood—the movement and not the reason for the movement—and therefore they bled. Thus, the value of a great discovery was not only negatived but perverted.

The address, which was listened to with great attention and was delivered without the assistance of any notes, ended somewhat abruptly owing to want of time.

SOCIETY FOR THE STUDY OF INEBRIETY.—A quarterly meeting of this society was held on Oct. 8th in the rooms of the Medical Society of London, Chandos-street, Cavendish-square, London, W., Dr. Wynn Westcott, coroner for North-East London, being in the chair.—Dr. Martyn Westcott read a paper on Sea Voyages in the Treatment of Inebriety. He said that although he could not boast of a very long experience of life at sea, yet he had formed a decided opinion about the suitability of sea voyages as remedies for drunkenness. In the case of the chronic drunkards who might be considered hopeless, it was generally found that they suffered from fatty heart and fatty or cirrhotic liver or kidney disease. Not only were these patients disinclined to mend their drinking habits, but they were physically run down and debilitated, and therefore needed nursing and supervision. Life on board ship under the most favourable circumstances was not all comfort and rest, and the nursing, dieting, and quietude so essential for such invalids were very seldom to be obtained. Few cases of advanced disease of any type seemed to him (Dr. M. Westcott) fit for sea-life even at its best. There were also the habitual drunkards and the dipsomaniacs who indulged only in periodical bouts. A few months, or even years, spent in the healthy atmosphere of a home for inebriates, where discipline and dieting were carried out under medical supervision, would do much towards restoring the drunkard's self-respect and strengthening his good resolutions. Then before resuming business a sea voyage might be undertaken. The ideal sea voyage for these patients was one taken in a sailing-ship which was commissioned on teetotal principles, with a teetotal captain and crew, and which touched at scarcely a single port *en route*, but no reformed drunkard should be trusted on a sea voyage *alone*. There was no doubt whatever that the idleness and monotony of the life and the saltness and the moisture of the air would tend to produce thirstiness. He did not consider a sea voyage in the light of a remedy where dipsomaniacs were concerned. It was usual for people to drink a good deal just before reaching the "home" port, and no doubt this was because they were in a disturbed, excitable state, expecting reunion with their friends, a return to the "old country," and a feeling that they ought to do something unusual. The periods of nervous irritability, depression, and præcordial distress to which the dipsomaniac was subject were likely to be more frequent on board ship than ashore. Therefore, if a dipsomaniac really wanted to be cured he (Dr. M. Westcott) would discourage him from embarking on a sea voyage. On the other hand, if any drunkard were really reformed and so sure of himself as to be proud of being a total abstainer there was no doubt that he would derive considerable benefit in his general health from the fresh outdoor life and change of surroundings characteristic of a sea voyage.—A discussion followed.

MANCHESTER CLINICAL SOCIETY.—The first meeting of the seventeenth session of this society was held on Oct. 14th at the Palatine Hotel, Mr. Herbert Lund, the President, being in the chair.—The President, in his introductory address, entitled, "Along the Urinary Tract," related numerous cases of surgical interest which had occurred in his practice. The liability to overlook the presence of vesical calculus in children suffering from phimosis and the tendency to neglect the "lacuna magna" in cases of recurrent gonorrhœa which resisted the ordinary treatment by injections were referred to and examples were cited. Suprapubic cystotomy in preference to lithotrity in patients the subjects of vesical calculus in whom the prostate was enlarged was strongly recommended, and the danger of getting a troublesome urinary fistula from the retention of a drainage-tube for any lengthened period was clearly demonstrated. That the bladder might be the seat of tertiary syphilitic ulceration was shown by two cases, in one of which the bladder had been opened for supposed malignant disease, and a large ulcerated surface was found. Under specific treatment the patient made a good recovery. Other cases of interest in renal surgery concluded the address, for which a hearty vote of thanks, moved by Dr. Holgate Owen and seconded by Mr. Stanmore Bishop, was accorded to Mr. Lund.—The following is the list of office-bearers for 1901–1902:—President: Mr. Herbert Lund. Vice-Presidents: Dr. E. T. Milner and Mr. J. E. Platt. Honorary treasurer: Mr. C. F. H. Kitchen. Honorary librarian: Dr. J. W. Hamill. Committee: Mr. Samuel Bagley, Mr. G. H. Broadbent, Dr. A. Brown, Dr. J. Gray Clegg, Dr. J. W. Crawshaw, Dr. J. Daniel, Dr. W. E. Fothergill, Dr. A. B. Fulton, Dr. James Holmes, Dr. D. Macmillan, Dr. F. Craven Moore, Mr. David Owen, Dr. R. T. Parkinson, Dr. E. J. Walker, and Mr. F. H. Westmacott. Honorary auditors: Dr. Alex. Fraser and Dr. W. K. Walls. Honorary secretary: Mr. J. Howson Ray.

IPSWICH CLINICAL SOCIETY.—A meeting of this society was held at the East Suffolk Hospital on Oct. 10th, Mr. J. F. C. Hossack being in the chair.—Dr. G. Vincent showed a patient who was suffering from Intractable Veldt

Sores. He had served in South Africa. No treatment appeared to have any effect.—Mr. Bartlet showed: (1) A case of Gunshot Wound of the Arm; and (2) a case of Sarcoma of the Mamma.—Mr. A. Y. Pringle showed a case of Carcinoma of the Mamma with Secondary Growths in the Liver.—Dr. H. H. Brown showed two specimens of Uteri removed for Carcinoma. He read notes on these cases. He also showed a specimen of Paget's Disease of the Nipple which he had removed; he commented upon the rarity of the disease.—Mr. C. K. Mosely showed a specimen of a Child's Larynx and Trachea with a penny firmly embedded at the bifurcation of the bronchi. The history was as follows. The child was brought to him six years ago with the history that she had swallowed a penny. No penny could be seen or felt and a skiagram also gave no result. The child was comparatively well, with occasional asthmatic attacks, some bronchitis, and on one occasion pain under the right arm. She suddenly had an attack of profuse hæmorrhage from the mouth due to the ulceration into a blood-vessel and died.—Dr. W. W. Sinclair read a very interesting paper upon Local Anæsthetics. He deplored the fact that general practitioners did not make enough use of these useful drugs. He read notes on several cases. Among these he mentioned one of an old man who was in too weak a state to stand a general anæsthetic. He enucleated one eye with beta-cocaine and acoine. He found beta-cocaine a most useful drug with practically none of the drawbacks of ordinary cocaine.—A long discussion ensued in which several members took part.—It was unanimously resolved that the honorary secretary, Dr. W. A. Gibb, should be asked to take charge of the Pathological Museum.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—The annual meeting of this society was held in the Medical Library of University College, Bristol, on Oct. 9th, Dr. D. S. Davies (and afterwards Dr. Barclay J. Baron) being in the chair.—Dr. Baron gave his presidential address on the Progress in the Diagnosis and Treatment of Disease of the Throat, Nose, and Ear during the past 20 Years. He drew largely from the lessons that his experience of special professional work had taught him, and he showed that the progress that had taken place in the knowledge of general medicine and surgery had been fully shared by this special branch.—The reports of the honorary secretary (Mr. J. Paul Bush), the editorial secretary (Mr. J. Taylor), and the honorary librarian (Mr. L. M. Griffiths) were read and adopted.—Mr. G. Munro Smith was elected President-elect and Mr. Paul Bush honorary secretary. The following six members of committee were elected: Dr. J. Michell Clarke, Dr. B. Rogers, Dr. H. Waldo, Mr. J. Dacre, Mr. J. Taylor, and Dr. P. Watson Williams. The following were elected to serve on the Library Committee: Mr. L. M. Griffiths, Mr. G. Munro Smith, and Mr. J. Taylor.

ÆSCULAPIAN SOCIETY OF LONDON.—A meeting of this society was held on Oct. 18th, the President, Dr. Arthur T. Davies, being in the chair. Dr. H. P. Miller showed a specimen of Ruptured Heart from a woman, aged 78 years. There had only been symptoms of "indigestion" until she vomited and fell back dead. The organs were healthy except the heart, which was fatty. The rupture was found at the lower front aspect of the left ventricle.—Mr. Reginald Brown read notes of (1) a case of Wry-neck in a child whose birth was long and difficult; and (2) a case in which a man, aged 45 years, whose liver was to be felt but was not enlarged upwards, complained of pain at and about the liver, had rigors and sweating and a rise of evening temperature to 102° F. He was given potassium iodide with mercury. In a week all symptoms lessened, and in two weeks they had disappeared.—A discussion followed.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—The first meeting of the session of this society took place on Oct. 4th, when Dr. W. G. Dun, the President, delivered an address on Blood-letting in the Treatment of Disease. He gave an historical survey of the whole subject and showed, by quotations from various classical works, how much blood-letting had been abused. The result was that in recent years a reaction had set in, and this method of treatment had been almost entirely abandoned. He maintained that the pendulum had swung too far in this direction and indicated the advantages of its use in conditions where there was sudden engorgement of the systemic veins, pulmonary artery, and especially of the right side of the heart.

Reviews and Notices of Books.

Text-book of Medicine. Edited by GEORGE ALEXANDER GIBSON, M.D., D.Sc., F.R.C.P. Edin., Physician to the Royal Infirmary, Edinburgh. Edinburgh and London: Young J. Pentland. Two volumes, pp. 824 and pp. 869. 1901. Price 25*s.*

THIS text-book adds one more to the list of those works in medicine not written by a single author, but by several, under the editorship of a physician who himself contributes several articles. This method possesses many advantages as it enables the editor to select those observers who have directed special attention, and it may be research, to those particular subjects upon which they write. There is a danger, however, of such publications being overdone, several having been published in a comparatively short period.

Dr. Gibson may be congratulated on having secured an unusually good number of authors to help him in compiling his text-book. There is scarcely one of them who has not already contributed in a useful manner to medical knowledge and literature. It would be invidious for us to select any one subject for criticism; all are good and their authors have evidently spared no pains to render their own contributions as complete as possible. The plan of including a preliminary discussion of general etiological and pathological problems by way of introduction to the more practical portion of the work is a good one, and an excellent article by Professor G. Sims Woodhead and the late Professor A. A. Kanthack is the result. The reactions of the body and its tissues are first described in the form of cloudy swelling, fatty changes, wasting, and atrophy, necrosis, &c.; also other processes, such as acute and chronic inflammation, regeneration, and repair, are ably described. The remarks on the pathology of bacterial infection will also be found most interesting and instructive. The important matters of infection, predisposition, immunity, toxæmia, &c., are fully discussed.

Another good innovation will be found—namely, that certain symptoms occasionally dignified by the title of separate diseases will be sought for in vain under individual headings, but will be found as parts of the subjects to which they properly belong.

We have already said that it would be invidious to select any one subject for criticism; in a text-book of this size the subjects mentioned are so numerous that to speak in general terms is more satisfactory than to particularise, and this we can do in the highest terms of praise. A notice of the work, however, would not be complete without naming some of the contributors who have assisted in making the book the success which it undoubtedly is; if we do not name all, it is not because the contributions of those whom we omit are less meritorious than the others, but because the number is so great (38 in all) that want of space forbids. Several of the contributors also have written on more than one subject, so that we merely mention their names in connexion with one class of disease. Dr. J. Rose Bradford writes on Diseases of the Kidney, Dr. J. Mitchell Bruce on Diseases of the Endocardium, Sir T. Lauder Brunton on Angina Pectoris, Dr. J. O. Affleck and Dr. C. B. Ker on Typhoid and Other Fevers, Dr. W. Pasteur on Diphtheria, Dr. Patrick Manson on Malaria and Tropical Diseases, Dr. Hector Mackenzie on Tuberculosis, Dr. A. P. Luff on Gout and Acute Rheumatism, Dr. R. T. Williamson on Diabetes, Dr. Thomas Oliver on Lead and Similar Forms of Poisoning, Dr. Sidney Martin on Diseases of the Stomach, Dr. H. P. Hawkins on Diseases of the Intestines, the Editor on Diseases of the Pericardium, Dr. R. W. Philip on Some Diseases of the Lungs, Dr. W. Allan Jamieson on Diseases of the Integumentary System, and amongst those who write on Diseases of the Nervous System are Sir William

Gowers, Dr. Risien Russell, Dr. Alexander Bruce, and Dr. F. W. Mott. There are many other contributors whose articles will doubtless attract equal attention to those that we have mentioned, but we trust that we have said sufficient to indicate the high standard of the work.

Encyclopædia Medica. Under the general editorship of CHALMERS WATSON, M.B., M.R.C.P. Edin. Vol. VI., Joints to Liver. Edinburgh: William Green and Sons. 1900. Pp. 562.

THE general standard of the present volume of this encyclopædia is practically the same as that of its predecessors. The main subject dealt with in this volume is Labour, and the 11 articles devoted to it occupy nearly 200 pages. These articles are divided into a physiological section and a pathological section. In the former is contained an account of normal labour and in the latter are considered the various abnormalities which may occur. The Physiology of Labour has been treated by Dr. F. W. Haultain of Edinburgh, and he gives a very clear account of this important subject. The author has acted wisely in giving the measurements of the maternal pelvis and of the fœtal head in what may be looked upon as "round numbers" instead of minute fractions; the former are much more easily remembered and are therefore more useful, even though they may not be so accurate; for practical purposes they are of greater value, because the individual normal variations which occur are quite sufficient to impair the trustworthiness of figures founded on averages. Dr. H. Jellett of Dublin has contributed a short section on the Duration and Progress of Labour. The article on the Diagnosis and Mechanism of Labour is from the pen of Dr. W. R. Dakin of St. George's Hospital, and is perhaps the best of the series. It is exceedingly clear and is abundantly illustrated by some clever diagrams which will serve to explain to the reader the by no means simple mechanism of the movements of the fœtal head. The account of the management of labour has been undertaken by Mrs. Chalmers Watson, who has described carefully the methods of precaution to be taken in a midwifery case. The article is good and trustworthy. In the list of articles apparently to be provided by the patient is a four-ounce bottle of chloroform. This should surely be brought by the accoucheur. Dr. W. Stephenson of Aberdeen has described Labour in Multiple Pregnancy, and Dr. G. E. Herman, who is curiously called "Obstetric Physician, King's College Hospital," has undertaken the section on Precipitate and Prolonged Labour. This is an excellent article and well illustrated. Dr. W. E. Fothergill of Manchester has written on "Faults in the Passenger," or, as it is more usually described, Labour Obstructed by Abnormalities in the Ovum. Dr. W. W. H. Tate, of St. Thomas's Hospital, has contributed the section on the Accidental Complications of Labour. Dr. T. W. Eden, of Charing Cross Hospital, has written the article on Retained Placenta and Dr. Jellett that on Post-partum Hæmorrhage. Dr. Jellett advises that in cases of post-partum hæmorrhage which have resisted hot intra-uterine douches the utero-vaginal canal should be plugged with iodoform gauze. The remaining article on Labour is from the pen of Dr. Amand Routh, of Charing Cross Hospital, and deals with injuries during labour.

Articles on the Kidney extend to many pages, but these are occupied chiefly by a paper on the Surgical Affections of this organ by Mr. E. Hurry Fenwick. As might have been expected this is ably written, and especially useful is the list of recent bibliography which is appended to each section of the article. For nephropexy Mr. Fenwick prefers silk sutures.

Another valuable section is concerned with the knee-joint, Mr. Alexis Thomson of Edinburgh describing the diseases and Mr. A. E. Barker of University College, London, and Dr. E. G. Leopold Goffe of London taking the injuries of the joint. In the account of dislocations of the patella, we find the expression "vertical dislocation" applied to the rotational displacement of the bone on a vertical axis; it is much better called "rotation of the patella on a vertical axis." The other article by Mr. Alexis Thomson on the Surgical Pathology of Joints is of value. In the description of the joint affections of gonorrhœa it is not pointed out that in one, and that the mildest, variety the articular disease appears to depend merely on irritation of the toxins absorbed from the urethra.

Another important series of articles concern the larynx, and of these we may mention especially that on Acute and Chronic Inflammations of the Larynx by Dr. StClair Thomson of London. There are many other articles of interest in the volume that do not need to be more particularly referred to, but we must not omit to notice the very valuable contribution of Dr. H. D. Rolleston on the Diseases of the Liver. It is clear and accurate, and so far as the space allotted has permitted it is complete.

Report on the Bacteriological Diagnosis and the Antitoxic Serum Treatment of Cases admitted to the Hospitals of the Metropolitan Asylums Board during the Years 1895 and 1896. By G. SIMS WOODHEAD, M.D. Cantab., Fellow of Trinity Hall and Professor of Pathology, University of Cambridge; formerly Director of the Laboratories of the Royal Colleges of Physicians of London and Surgeons of England. London: Printed for the Metropolitan Asylums Board. Pp. 271. Price 7*s.* 6*d.*

THIS most elaborate report is full of interesting matter and the only point for regret is that its appearance has been so long delayed. The report deals exclusively with the cases that were examined bacteriologically during the period between Jan. 1st, 1895, and Dec. 31st, 1896. Owing to overlapping, and in order to bring as many completed cases as possible within the scope of the report, every completed case of which an examination was made during this period has been included, with the result that a few cases appear as having been admitted to hospital during the year 1894, and specimens from cases which were not discharged until the early months of 1897 are included because they were examined in 1896. This plan has enabled the statistics to be somewhat larger than if the calendar year had been strictly adhered to. The large number of cases dealt with enables some definite conclusions to be drawn both as regards the value of the bacteriological diagnosis of diphtheria and the treatment of the disease by antitoxin, and in addition certain side issues are also dealt with.

During the period above described 27,128 cultivations were examined. Of these 24,933 could be traced and assigned to 12,172 patients. Of these cases 73·42 per cent. gave evidence of the presence of diphtheria bacilli, in 5 per cent. of the whole bacteriological examination failed to assist the diagnosis of the disease. This clearly demonstrates the valuable aid afforded by an examination of material removed from the throat in determining the nature of the disease in doubtful cases. Stress is also very rightly laid on the importance of further examination when the first test proves negative; that is to say, in cases which from a clinical point resemble diphtheria, but in which no pathogenic bacilli are found when the usual "swab" has been taken and examined. The reasons for failure are several, e.g., imperfect swabbing of the throat, the use of antiseptics, or the localisation of the bacilli; these must be borne in mind when the cultures yield negative results. The cases of this nature recorded in this report were considerably fewer in 1896 than in 1895, showing that by increased practice in taking the swabs, improved technique, both in preparation of media and microscopical specimens, and further experience in the examination of those specimens, this source of error may be reduced to a minimum.

Another important point referred to is that of mixed infections, especially as regards prognosis. Where diphtheria bacilli only are found the long bacillus appears to be the most active agent in the production of the disease. Mixed infections were proved to be always more fatal than were simple diphtheria intoxications. Contrary to what is usually stated, it was found that the staphylococcus reinforcing the diphtheria bacillus appeared to be associated with a more fatal form of the disease than when a mixture of a streptococcus and the diphtheria bacillus was found. This feature is most marked in the case of the shorter and irregular forms of the diphtheria bacillus and where the long bacilli are absent; in this form of mixed infection the results are much more fatal than are the simple diphtheria infections where the short and irregular bacilli alone are present.

Clearly associated with this matter is the consideration of cases of scarlet fever complicated by diphtheria, and it is interesting to note the fact that in such cases the mortality has been greatly reduced where antitoxin has been used—greatly, no doubt, because of the early period at which the antitoxin is usually administered in these cases.

On turning to the tables of mortality it is seen that this varied greatly at different hospitals, being as high as 27·07 per cent. at the North-Western Hospital and as low as 0·0 at the Gore Farm Hospital, although at the latter place there had been 81 cases, all of which had diphtheria bacilli present in the throat. Further, of the 2503 cases under five years of age in which diphtheria bacilli were found, only 31·52 per cent. proved fatal, as against 47·4 per cent. in the pre-antitoxin period. As regards the percentage mortality where different parts are affected some interesting facts come out. In 1895 where the fauces alone were affected the percentage death-rate was 12·1; where the fauces and nares were affected, 39·5; fauces and larynx, 37·3; the larynx only, 30·7; and where the fauces, larynx, and nares were all affected, 62·2 per cent.; the extent and position of the membrane thus being shown to play a very important part in determining the severity of the disease. In 1896, when the antitoxin had undoubtedly improved and the method of treatment was better understood, there was, as the tables show, a considerable fall in the percentage mortality, especially amongst those cases that must be looked upon as of the most severe type. Another proof of the efficacy of the antitoxin treatment is furnished by the results of those cases which necessitated the performance of tracheotomy. Amongst the 3042 cases in the pre-antitoxin year 1894 there were 261 tracheotomies with 184 deaths, a mortality of 70·4 per cent. of the cases operated on. In 1896, when antitoxin was more used, there were only 246 tracheotomies amongst 5068 cases; of these only 104 patients died, or 41·46 per cent. As Professor Woodhead points out, had tracheotomy been necessary in the same proportion of cases in 1896 as in 1894, there would have been 467·7 instead of 246; or with the same percentage death-rate 328·7 instead of 104, the saving of life in one year on tracheotomy cases alone amounting on this calculation to 225.

There are several other important and interesting matters in reference to the use of the diphtheria antitoxin dealt with in the report, all strongly supporting the success of this method of treatment. This is all the more striking in that a large number of cases are dealt with, making the statistics far more valuable and convincing than when only the results of a few cases are considered.

The second part of the report is devoted to an account of the preparation of diphtheria antitoxin. The method of preparation of diphtheria serum is first described. Then Dr. Cartwright Wood's more rapid and safer method of producing antitoxin is detailed. The technique employed in injecting the horses, collecting the blood, and separating and distributing the serum is duly given. Further we find described the principles and methods of testing the potency of anti-diphtherial or diphtherial antitoxic serum and, in tabular form, the amount of antitoxin supplied to the hospitals under the management of the Metropolitan Asylums Board.

In the appendix are given in tabular form the details from which the collective tables in the earlier part of the report are compiled. The labour involved in the preparation of this volume must have been immense, and Professor Woodhead and those who assisted him may be congratulated on having issued a work which will accentuate and encourage the general use of one of the most valuable and successful therapeutic measures of modern times.

LIBRARY TABLE.

Proceedings of the New York Pathological Society for the Years 1899 and 1900. New York: Printed for the Society. 1901. Pp. 347.—Of the numerous and varied communications forming this volume the following may be selected as a few illustrative examples:—Addison's Disease with Simple Atrophy of the Adrenal Body (Dr. Carlin Phillips); a Case of Weil's Disease, with a Short Experimental Study of Infective Icterus (Dr. Harlow Brooks); a Male Pseudo-hermaphrodite (Dr. F. S. Mathews); Miliary Tuberculosis of the Pleura without other Tuberculous Involvement of the Lung (Dr. Eugene Hodenpyl); Carcinoma Gelatinosum of the Mamma and other Organs (Dr. Hodenpyl and Dr. J. H. Larkin); Neuron Retraction (Mr. Frank and Mr. Weil); Mucinæmia (Dr. Isaac Levin); and Sarcoma of the Small Intestine (Dr. E. Libman). Some of the specially chemical or microscopical papers are as follows:—Cases of Gangrenous Bronchitis, with Isolation of an Organism Related to Streptothrix; Puerperal Infection with the Bacillus Aerogenes Capsulatus; Purulent Pneumococcus Meningitis; Changed Appearance of the Diphtheria Bacillus after Four Years' Cultivation; Chemical Examination of a Knife-grinder's Lung; Unusual Cases of Leukæmia; Typhoid Infection of the Uterus; Microscopical Demonstration of "Vaccine Bodies"; Preparation of Hæmatein Staining Solutions; Acid Intoxications; Death from Ether Anæsthesia; and Diabetic Coma. Professor Simon Flexner's "Middleton-Goldsmith" lecture on the Etiology of Tropical Dysentery forms an appendix.

The Therapeutics of the Röntgen Rays. By Dr. E. SCHIFF (Vienna). Translated by W. DEANE BUTCHER, M.R.C.S. Eng. London: Rebman, Limited. 1901. Pp. 36. Price 1*s.*—Hypertrichosis, lupus, and lupus erythematosus are the abnormal or morbid conditions the treatment of which is discussed at most length in this pamphlet. For all three of them Dr. Schiff strongly recommends exposure to the Roentgen rays and gives a variety of particulars as to strength of current, pattern of vacuum-tube, length of exposure, and so on. For hypertrichosis the current in the primary circuit ought to be at most two ampères, with a potential of 12 volts. The distance of the tube is from six to eight inches. Each exposure is of only 10 minutes' duration. The hair often grows again after a period of two or three months, but permanent alopecia is frequently obtained. It is also found that in sycosis the Roentgen rays have a curative effect quite apart from the destruction of the hair. For the treatment of lupus and lupus erythematosus a current of three and a half ampères in the primary circuit is used, with a potential of about 12 volts and a duration of exposure of from 10 to 15 minutes, the tube being at a distance of four inches and the surrounding skin being protected by a mask of stout cardboard covered with sheet lead half a millimetre in thickness.

Atlas and Epitome of Ophthalmoscopy and Ophthalmoscopic Diagnosis. By Professor Dr. O. HAAB of Zürich. Authorised

translation from the third revised and enlarged German edition. Edited by G. E. DE SCHWEINITZ, A.M., M.D., Professor of Ophthalmology in the Jefferson Medical College, Philadelphia, &c., with 152 Coloured Lithographic Illustrations. London and Philadelphia: W. B. Saunders and Co. 1901. Pp. 83. Price 13s.—This work is a translation of one of Lehmann's useful "Medicinische Handatlanten" and the original has been rendered into very good English. A translation by Mr. Ernest Clarke of the first edition of Professor Haab's treatise was reviewed in this journal in 1895. It then contained 39 lithographs, which were for the most part coloured, and were accompanied by 55 pages of letterpress. In this volume before us, which is the translation of the third German edition (recently reviewed in these pages), the number of illustrations has almost doubled and the letterpress has extended to 80 pages. The increase is due in the case of the text to a fuller description of the modes of examining the eye by the direct and indirect methods, to a more exact account of the shadow test, and of pulsation phenomena. In the case of the illustrations those that have been added are in part pathological and in part exhibit the appearances presented by sections of normal structures. The third plate shows a section through the retina, choroid, and sclera near the macula lutea seen under a low power. We should have expected a better plate. It shows the nuclear layers of the retina with quite isolated and independent nuclei. The ganglion cell layer is depicted as it was drawn 40 years ago. There should at least have been a companion plate showing connexions of the cells and nuclei and generally the results of modern research with high power of the microscope. Several additional plates showing forms of albuminuric retinitis have been added in this edition as well as others exhibiting the microscopic lesions. Dr. Schweinitz has himself appended a few figures—namely, those showing angioid streaks in the retina and the ophthalmoscopic appearances seen in arterio-sclerosis—which are well drawn. One of the new illustrations introduced by the author exhibits the appearances presented in syphilitic neuro-retinitis and disease of the retinal arteries. The case shows a stellate figure at the macula, but it is stated that there was not at any time a trace of albumin discoverable in the urine. A good chromo-lithograph is also given of a perforation of the macula lutea after contusion of the eyeball; the perforation has sharply-defined edges, is about half the size of a papilla, and is surrounded by a slightly opaque area, presenting minute dots and in places covered with pale, glistening spots and patches. Professor Haab remarks that openings of this kind at the fovea may appear spontaneously in advanced age without any traumatism, possibly owing to arterio-sclerosis. There is an instructive plate showing an air-bubble in the upper portion of the vitreous due to the entrance of a fragment of iron. We recommend Dr. Schweinitz's translation of the third edition of Professor Haab's Ophthalmoscopic Atlas as a work that should be in the ophthalmic wards or in the library of every hospital into which ophthalmic cases are received. It will be found to be extremely useful as a book of reference.

Annual Report of the Imperial Bacteriologist for the Year 1900–1901. Calcutta: Office of the Superintendent of Government Printing. 1901. Pp. 9.—In his report for the year 1900–1901, submitted to the Government of India, Dr. Alfred Lingard, the Imperial bacteriologist, states that during that period the laboratory officials were principally occupied in manufacturing anti-rinderpest serum and despatching it to the superintendents of the civil veterinary department and other officers who demanded it. A protective serum is being made by two methods, one requiring about 80 days for preparation and the other requiring from 14 to 20 days. The propagation of locust disease fungus was continued and 156 tubes were sent out during the year, but it does not seem to have established its efficacy in India as it did in South Africa. Dr. Lingard has collected material for a second report on lymphangitis epizootica, a disease which was imported by mules from Italy and assumed the epidemic form in India in 1899.

JOURNALS AND MAGAZINES.

The Journal of Anatomy and Physiology. Conducted by Sir WILLIAM TURNER, K.C.B., F.R.S.; D. J. CUNNINGHAM, M.D., F.R.S.; G. S. HUNTINGTON, M.D.; A. MACALISTER, M.D., F.R.S.; and J. G. M'KENDRICK, M.D., F.R.S. Vol. XXXVI., Part 1. October, 1901. With Plates and Figures in the Text. London: Charles Griffin and Co. 8vo. Pp. 94. Price 6s.—This part contains the Proceedings of the Anatomical Society of Great Britain and Ireland for July, Notes on the Aberdeen University Anatomical Society, and ten articles. Of these the first is a Contribution to the Study of the Morphology of Adipose Tissue, by Dr H. Batty Shaw of University College Hospital. This observer agrees with Flemming that fat cells are modified connective tissue cells. 2. The Structure of the Left Auriculo-ventricular Valve in Birds, by Mr. A. Hodgkinson of Owens College, Manchester. He finds that this valve is formed of three cusps and is therefore of the tricuspid type. 3. On the Development of the Renal Portals, and Fate of the Posterior Cardinal Veins in the Frog, by Dr. Thomas W. Shore, Lecturer on Comparative Anatomy and Biology to St. Bartholomew's Hospital and College. 4. A description of the "Socia Thymi Cervicalis" and Thymus Accessorius, by Dr. N. Bishop Harman. 5. A case of Rudimentary First Thoracic Rib in a Horse, by Dr. O. Charnock Bradley, Professor of Anatomy, Royal Veterinary College, Edinburgh. The condition was symmetrical. 6. A case of Congenital Malformation of the Heart with Abnormalities of the Abdominal Viscera; Absence of the Spleen; Absence of the Hepatic Section of the Inferior Cava, by Dr. T. W. P. Lawrence and Dr. David Nabarro. The case is in many respects interesting and the dissection was carefully made. 7. Two cases of Supernumerary Radio-palmar Muscle, by Dr. Norman W. Kater. 8. A case of Multiple Renal Arteries, by the last-named writer. 9. Description of a Fœtus Amorphus, by Dr. George A. Charlton, with three plates. 10. Acardiac Monster caused by a Fœtal Adhesion to a Placenta Succenturiata, by Mr. Edred M. Corner, resident assistant surgeon, St. Thomas's Hospital.

Caledonian Medical Journal.—Much of the October number is occupied with an account of the twenty-first annual meeting of the Caledonian Medical Society held on August 9th in the Hall of the Faculty of Physicians and Surgeons of Glasgow, Dr. H. Cameron Gillies (London) presiding. At the annual dinner, which took place the same evening, the toast of the Caledonian Medical Society was proposed by Sir Hector Cameron and acknowledged by Dr. Gillies. The society has 180 members. The Gunning Celtic prizes of the society, to be awarded next year, have been several times mentioned in THE LANCET; it is now announced that another prize of £10 will be competed for after the award of the Gunning prizes has been made. Dr. D. G. Sutherland of Brora, Sutherlandshire, contributes to the journal an article on surnames in that county. Mackay is the most frequent one, being borne by 20 per cent. of the population; next in numerical order is Sutherland, with 8·5 per cent.

Birmingham Medical Review.—In the October number Dr. W. A. Potts writes on Mentally Deficient Children with especial reference to the early diagnosis of the condition in question. Dr. T. Stacey Wilson describes the various Displacements of the Heart, classifying them as due either to changes within the heart itself, or to alterations in the

volume of the lungs or of the abdominal organs, or to the growth of tumours.

Journal de Mal de Mer et de la Santé à bord des Navires.—Paris: 82, Boulevard Port-Royal.—In the August-September number of this periodical, which is the journal of the League against Sea-sickness, Dr. Zahé advances the argument that slight degrees of umbilical hernia are more common than is generally supposed and that a predisposition to sea-sickness is thereby created. For the relief of sea-sickness attended by this complication he has devised a sort of compress, called the "contentif ombilical." Dr. Maggiornanni of Rome writes recommending the hydro-electric bath.

New Inventions.

ELECTRICAL EVAPORATING AND INHALING APPARATUS.

IT is claimed for the evaporating and inhaling apparatus shown in the accompanying illustration that it may be used even by a patient lying in bed without danger of fire or explosion, the source of heat being a small electric lamp. The vapour employed can be inhaled through either the mouth or the nose with the help of the indiarubber nozzles sent with the apparatus, or it can be blown into the ear by means of a double bellows. The drugs capable of being inhaled in this way include oil of turpentine, oil of eucalyptus, alcoholic solutions of menthol, thymol, creasote, guaiacol, carbolic acid, &c. The prescribed number of drops are allowed to fall on wadding contained in the upper part of the inhaler. The apparatus is then connected with a source of electric current, such as a wall-plug or lamp-holder, or an accumulator if electricity is not laid on to the house. When the incandescent lamp is alight the patient may begin to inhale. The maker is Mr. K. Schall, 55, Wigmore-street, W. The apparatus in its ordinary form is designed for a tension of 110 volts. If tensions much exceeding this are to be employed a statement to that effect should accompany the order.

A DISINFECTING CLOTH FOR TELEPHONES, SPEAKING-TUBES, &c.

THAT telephones and speaking-tubes may easily become sources of infection is obvious, and the "odourless retentive disinfecting cloth" is designed to avoid this risk. According to our analysis the fabric contains two distinct chemical salts, one of which, being hygroscopic, serves to keep the cloth permanently moist and the other to render it germicidal. In a word, the cloth is an antiseptic wiper, as shown by a number of bacteriological experiments made with it. Our experiments have shown that the cloth keeps moist practically indefinitely, a very important point. The cloth is replaced at intervals by the company supplying it for a small annual payment. Disinfecting tests have been made with it by purposely infecting the transmitter and receiver of a telephone with cultures of disease germs. It is stated that on the average 98·70 per cent. of the germs were removed, and, further, that the microbes on the cloth were found to be destroyed. In this way the pus organism, the typhoid organism, and fæcal organisms were employed for the experiment. There is no doubt that the cloth might be employed with special advantage in public call offices. It may also be used for other purposes, such as for cleaning surgical instruments, for wiping Bibles in police-courts where the objectionable system of kissing the book still prevails, for wiping razors, for cleansing the seats of water-closets, and countless other uses and applications. The specimen which we examined was submitted to us by the Odourless Retentive Disinfecting Cloth Company, of 96, Leadenhall-street, London, E.C.

A MEAT JUICE EXTRACTOR.

THE accompanying illustration easily explains the construction of this very useful beef press which is intended chiefly for use in the patient's own home. The interior consists of a strong metal cup provided with perforations. Into this cup and nearly fitting it a similarly strong cup, made also of metal, is forced downwards by means of a screw and handle similar to that of the copying press. The pressing cup is deeply grooved in a diagonal direction. The surfaces of both cups are galvanised and are clean and bright. The apparatus works excellently and economically. It is a great advantage for the patient to have beef juice prepared freshly at his own home, and, moreover, his medical adviser is thus enabled to prescribe exact allowances. Of course, mere pressure does not extract by any means the entire nutritious portion of beef; still, a juice is obtained in this apparatus of a powerful, nourishing, and stimulating quality. Obviously the extracted meat or residue may also be used if desired. The apparatus is well adapted for both hospital and home use and is very convenient. It may be obtained from the Alexander Manufacturing Co., of 42 and 44, Moor-lane, London, E.C.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY meeting of the Council was held on Oct. 17th, Mr. H. G. HOWSE, the President, being in the chair.

A letter was read from the Secretary of State for Home Affairs reporting the very gracious reception by His Majesty the King of the address of condolence from the Council of the College on the death of the Dowager Empress Frederick of Germany.

Mr. HOWARD MARSH reported that in accordance with the wishes of the Council he had attended the celebration of Professor Virchow's eightieth birthday at Berlin on Oct. 12th and had presented to him on behalf of the Council an address of congratulation. It was resolved that the address should be entered on the minutes, and the best thanks of the Council were given to Mr. Marsh for acting as the delegate of the College.

Mr. R. HARRISON, on behalf of the Committee on the Annual Report of the Council, submitted a draft copy of the report to be presented to the Fellows and Members at the annual meeting to be held on Nov. 21st, 1901.

Sir William MacCormac, Bart., was re-elected a member of the Committee of Management.

Mr. H. T. Butlin was elected a member of the Laboratories Committee in the vacancy occasioned by the retirement of Mr. H. G. Howse.

A letter was read from the Privy Council, inclosing a copy of a note from the Egyptian Acting Minister for Foreign Affairs, announcing that a medical congress will be held at Cairo from Dec. 10th to 14th, 1902, and on behalf of the Egyptian Government expressing a hope that British scientific societies and institutions will take part in the congress.

A letter was read from the President and Secretary of the Fourteenth International Medical Congress, asking the President of the College to announce that the Congress will be held at Madrid from April 23rd to 30th, 1903, and inclosing copies of the rules of the Congress and forms of application for membership.

THE LANCET.

LONDON: SATURDAY, OCTOBER 26, 1901.

School Punishments.

No animal when young likes being taught, and therefore some measures of discipline are found to be a necessity. Discipline includes punishment, and one form of punishment is that known as corporal, involving the infliction of pain. We have always maintained that corporal punishment is the best form for certain offences, notably for that form of brutality known as "Hooliganism," a word which includes attacks upon the police or upon old men or women with or without the additional crime of robbery. We should also like to see the punishment of flogging extended so as to cover criminal assaults upon children or gross cases of cruelty to lower animals. But the matter with which we are more immediately concerned at present is corporal punishment as used in schools, whether in great public schools, in national schools, or in board schools, and as an instance of what corporal punishment as used in a school should *not* be we cite the following account as forwarded to us by a correspondent. He tells us that his son, aged 11 years, a day boy at a large public school, returned home one day with his hands severely bruised on account of a caning received from the head-master. The boy's hands were covered with weals and there were extravasations of blood under the skin. So severe were the injuries that the boy was unable to use pen or pencil for some days.

The object of all school punishments should be to deter as well as to reform, and they may be divided into expulsion, corporal punishment (caning or birching); and impositions. Of the first class of punishment we shall say nothing here. With regard to the second we think it both necessary and useful. But when administered it should be a reality and not used as it was at Westminster in BUSBY'S time or at Eton under KEATE as a punishment for great offences and trivial misdemeanours indiscriminately. With regard to the instrument by which the punishment is inflicted it is either the cane or the birch, and in our opinion the cane should never be used as the ordinary instrument of school punishment. A cane may possibly bring about irreparable damage, and caning on the hands is the most senseless and cruel form of punishment imaginable. The hand is a delicate and wonderful piece of anatomy, its nerve endings and the muscles which bring about the finer movements are but imperfectly protected from blows, and to produce injuries such as those described by our correspondent would be wrong even in reply to the worst of schoolboy offences. The birch is the best implement of punishment for small boys. Firstly, it hurts; secondly, if applied in reason it does no harm; and, thirdly, the seat of election for a birching is the gluteal region and this from its anatomical construction is fitted for the reception of corporal punishment. The skin over it is thick and plentifully supplied with nerves so that the desired pain is easily felt without the infliction of violence. There is underneath the skin a good layer of fat, underneath this again is a layer of thick coarse-fibred muscles, upon which follow the bones protecting the parts within the pelvic cavity. But while we defend corporal punishment in certain cases, we consider that there are rules which should govern its infliction. In the first place it should never be inflicted by an under-master, but only by the head-master, or someone to whom the head-master delegates his penal authority. This plan practically necessitates the existence of the second rule—namely, that corporal punishment should never be inflicted immediately upon the commission of the offence, and also it allows opportunity for appeal. Thirdly, it should be reserved for offences of some magnitude and should be fairly severe. The birch is the best instrument and it should be applied to the buttocks.

The idiotic custom of setting lines is a futile form of punishment. True, it keeps a boy from his play, or, what is worse, prevents him from doing work which might be useful to him, but as a punishment it does not do the slightest good and leads to habits of deceit. We have probably most of us written out, say, 500 lines, scribbled off as fast as possible, with two or even three pens at a time, knowing perfectly well that the master would never count them and would probably just glance at them. An imposition should be of some use, and to set a boy a copy of verses or a piece of prose composition would be infinitely more serviceable. Punishment is a necessity, but it should be inflicted in a reasonable manner, and corporal punishment, if safeguarded, as we have endeavoured to show, is a penal method by no means to be lightly given up. It is, we fancy, not nearly so much resorted to nowadays as it was even so lately as 30 years ago, and our readers should remember that all of them can at times add the weight of their professional opinion to the protests of parents in a case such as we have cited above: while such of them as are medical officers of schools can raise their voices against the use of the cane in any way, and caning on the hands should be absolutely interdicted.

Ophthalmoscopy Applied to the Eyes of Mammals.

A HIGHLY creditable memoir, the fruit of many years of quiet and unobtrusive research, has just been published in the Philosophical Transactions of the Royal Society. It is written by Mr. GEORGE LINDSAY JOHNSON and is devoted to the description and illustration of the ophthalmoscopic appearance of the eyes of many animals. A few, but very few, works have been published on this subject. The eyes of the ordinary domestic animals have of course been examined by many veterinary surgeons, but even of these scarcely any coloured plates are extant, and the inquirer has to be content with verbal descriptions. Mr. JOHNSON'S 29 plates, with more than 60 figures, are a revelation in this department of ophthalmology. They are beautifully executed by Mr. ARTHUR W. HEAD and have been extremely well chromo-lithographed. 182 mammals have been examined, falling under 103 genera, and 47 families representing all

the natural orders of this class, with the exception of the cetacea and sirenia. The colour of the fundus oculi in those animals that have no tapetum is chiefly due to the reflection of light by the choroidal pigment. In the carnivores, which have a cellular tapetum, it is mainly determined by the colour of the retinal pigment, whilst in the ungulates, which have a fibrous tapetum, it is due to the colour of the tapetum modified by the colour of the retinal pigment. Examples of the different colour presented by the fundus may be seen in man and in nearly all the primates, in the suidæ, in the hyracoidæ and in the rhinoceros, in which it is of the red type; a yellow fundus is seen in the chiroptera, in some felidæ and mustelidæ, in the elephant and in the tapir; and lastly, a green and yellow-green type of colour is met with in most carnivora and in all selenodonta except goats and camels. These varieties are beautifully shown in the plates. The drawings were obtained by the direct method of using the ophthalmoscope, which would at first sight seem impossible to apply to wild animals, since it involves the close approximation of the eye of the observer to that of the animal under observation; but Mr. JOHNSON observes that, as a rule, kindness, coaxing, and taming were sufficient to overcome all difficulties. The lids were held apart with the fingers or spring specula and mydriatics were generally employed. When we find elaborate drawings of various monkeys and lemurs, of the seal, the serval, the skunk, the black bear, the camel, the wild boar, the Indian rhinoceros, the tapir, the elephant, and many others, we are at a loss whether to admire most Mr. JOHNSON'S courage in patiently watching his opportunity to examine the eyes of these formidable animals, which could not have been subjected to any anæsthetic, or the very curious, interesting, and instructive drawings which he has obtained.

The disposition of the choroidal vessels is seen to vary greatly. In some instances they are very conspicuous, as in the Indian rhinoceros and the elephant, the kangaroo, the wombat, the beaver, and the chinchilla, the meshes being sometimes fine and close, at others coarse with wide areolæ; sometimes, on the other hand, they are wholly invisible, as in the hairy armadillo, the British black rat, and the hedgehog. The optic disc, again, presents great differences in form, size, and colour, being sometimes circular, as in man, the chinchilla, the beaver, and many others; sometimes oval, with the long axis vertical, as in the echidna; or horizontal, as in all the equidæ, the carnivore *cynictis*, the wild boar, the hog-deer, and the chevrotain; sometimes with large retinal vessels springing from near its centre; and sometimes with numerous small vessels emerging at, and radiating from, its periphery, as in Burchell's zebra. Sometimes it is of a dead white colour with no visible vessels, as in the Indian rhinoceros and the perissodactyls generally, the hairy armadillo, and the echidna; or grey without vessels, as in the Brazilian porcupine; or with a small closed plexus, as in the rabbit-eared perameles, the squirrel-like phalanger, and the rufous rat-kangaroo. In the striped hyæna—not perhaps the most engaging of animals to examine—in the black-backed jackal, and in the black bear it is of a deep red hue, whilst in others, as the chevrotain and the hog-deer, it seems to be permeated with pigment. The different appearances of the tapetum with its yellowish-green tint and brown or black borders are beautifully portrayed. It is exceedingly interesting to find that Mr. JOHNSON has observed in certain animals as normal conditions appearances which in man are regarded as congenital defects or vestigial relics. Thus opaque nerve-fibres are very marked in some of the rodents and marsupials. Nearly all of the cat tribe and the flying squirrels present a physiological cup in the disc. A condition resembling retinitis pigmentosa is seen in the galagos and the lorides, and it is remarkable that if these nocturnal animals are long exposed to daylight the pigment advances concentrically as in the retinitis pigmentosa of man, and the animals gradually lose their vision. A persistent hyaline artery which is occasionally seen in man is found as a normal condition in nearly all the ruminants and in a large number of the rodents. Some of the rodents, and more especially all the agoutis, present vestiges of a pecten.

The presence of nerve-fibres with retained sheaths giving a radiated aspect to the disc is of common occurrence, being seen in the skunk, in the squirrel, and in the rabbit. As a good ophthalmologist Mr. JOHNSON has not confined his attention to the aspect of the fundus, but has made some observations on the refraction of many animals, and finds that with the exception of the seals and whales vision is hypermetropic throughout the mammalia. The seals are astigmatic to an extraordinary extent—a condition that is probably connected with their amphibious life. Domestication appears in the eye, as in other organs, to increase variability, the colour of the fundus as well as the refraction undergoing marked alterations in such animals as the dog, the horse, and the rabbit as compared with wild animals. It is of considerable interest to find that a classification of animals in accordance with their ophthalmological features supports, and is in general agreement with, the best modern classification founded on other characters. Mr. JOHNSON has made a good commencement of what may be termed comparative ophthalmoscopy; the field is large, there are few cultivators, and it may be hoped that he will have time, health, and leisure to pursue it.

War Office Reform in Relation to the Army Medical Services.

WE would call the attention of all who are interested in War Office reform in general and the new scheme for the reorganisation of the Army Medical Services in particular to the very important Orders which have been issued for the reconstitution of the War Office. It will be remembered that some time ago an independent and influential committee was appointed to go into the whole subject of War Office reform. In due time this committee of business men known as the DAWKINS Committee issued its report and put forward its recommendations, among which was a proposal for the institution of a War Office Board possessing large and far-reaching powers. This proposal has not only been accepted by the authorities in principle, but it has since been extended, amplified, and applied in the directions laid down and embodied in the Orders now issued by the War Office. The new scheme is an elaborate and very important one, and we have now been furnished with a description of the machinery by

which it is proposed to be worked. There is, first of all, to be a powerfully constituted War Office Council, presided over by the Secretary of State for War, or in his absence the Commander-in-Chief, which will meet weekly to discuss and to deliberate upon all matters referred to it by the Secretary of State or brought before it by individual members of the council. The functions of this council are apparently of an extended character with delegated powers and authority commensurate with its responsibilities. The Director-General of the Army Medical Department is to be a member of this council as far as all medical and sanitary questions are concerned. In connexion with this Council an Executive Committee is to be established at the War Office for the purpose of coördinating the business of the office and of securing combined action on matters affecting more than one department. The functions and duties of this permanent Executive Committee and of its respective members are clearly set forth. The Deputy Director-General of the Army Medical Department, or an officer selected by the Director-General, is to be a member. Provision is also made for the formation and summoning of special Departmental Committees to report upon any special subjects or points. The existing Army Board is to remain as it is as regards its constitution and duties with the important addition that the Director-General of the Army Medical Service is to be a member of it—a reform which we have repeatedly called for in THE LANCET. Henceforth, it appears to us, the Army Medical Service will be amply represented in the highest military places and in a position to put forward its proposals and to initiate discussion thereon, and so to exercise an effective influence in all army medical and sanitary questions as well as in those bearing on the health and comfort of troops. Whether the Advisory Board proposed in the report of Mr. BRODRICK'S Committee on the reconstitution of the Army Medical Services may prove to be unworkable or not, it surely cannot weaken the hands of the Director-General on the War Office Council, seeing that his proposals will come before the latter supported by an independent civil element. We pointed out last week that this report was but a series of recommendations, and we asked our readers to think whether it might not be well before virtually condemning an immature and untried scheme—and thereby threatening to arrest the growth of efforts towards reform—to wait until something further was known about it and about the intentions of Government in regard to it. So far, at any rate, the wisdom of adopting that policy seems to have been justified. The Army Medical Service, as it seems to us, when represented upon, and taking part in the deliberations of, three very important boards at the War Office, can scarcely fail to occupy a more influential and powerful position than has hitherto been the case. Other changes are, no doubt, required in the scheme put forward by Mr. BRODRICK'S Committee for the reconstitution of the Army Medical Services—for example, a correspondent points out in our columns this week that from one point of view an actual decrease in pay is being offered to the officers of the Royal Army Medical Corps under the new recommendations; but that of temperate criticism will be the fairest and best spirit in which to approach the report.

Annotations.

"Ne quid nimis."

QUACKS AND AN AMERICAN NEWSPAPER.

A NEWSPAPER published in the United States, the *Philadelphia Times*, appears to have taken a step which should commend it to all decent citizens in the district in which it circulates. It has published a statement to the effect that it declines to accept any advertisements that savour of quackery or fraud and it has defined its position as follows: "The *Times* has drawn a line that it never allows to be passed. It refuses to insert at any price, though they are repeatedly offered, all advertisements of 'diseases of men,' 'female remedies,' 'guaranteed cures,' and such like indecencies, and of massage, clairvoyance, and other cloaks for vice. It equally refuses advertisements which promise something for nothing, that guarantee big dividends or otherwise lure the reader to questionable investments. And it absolutely rejects all objectionable displays and the huge illustrations in advertisements that are offensive to good taste and common decency." We commend the *Philadelphia Times* for the position which it has taken up and we see no reason why a newspaper that has resolved to keep its columns free from degrading advertisements should not give the fullest information as to its policy to the public for which it caters. In England there are many newspapers which do not publish advertisements of the class first referred to. These are, as a rule, newspapers circulating in classes of the community where such advertisements would not be tolerated or would not secure customers for the advertisers. The majority of newspapers in England which circulate among the lower middle and lower classes of society, and in circles where the credulous and the vicious are likely to form an appreciable element, almost invariably contain advertisements of the more disgraceful kind which the *Philadelphia Times* refuses to accept. It would be utopian for us to hope for the exclusion of quacks' advertisements from newspapers simply on the ground that they contain fraudulent promises of impossible cures and are the means of swindling simple-minded people. It is otherwise, however, when the advertisements deal with the results of sexual immorality and more or less openly proclaim the merits of alleged aphrodisiacs and abortifacients. Recent prosecutions have for a time caused a cessation of advertisements of the latter class; those of the former continue, and it will be remembered that it was the vendors of the female pills and concoctions who were prosecuted—not the newspaper editors who accepted their perfectly candid advertisements. Advertisements relating to venereal diseases and infirmities connected with sexual intercourse are in England declared indecent by Act of Parliament when exhibited near the highway or in public urinals. In newspapers their indecency would presumably be a question of fact for a jury, but the police do not institute proceedings in respect of them. That their suppression is desirable none will deny, for they are not only the product of vice and immorality—they are direct incentives. By a coincidence the *St. Louis Courier of Medicine*, from which we quote the manifesto of the *Philadelphia Times*, contains an abstract of a paper read by Dr. George Engelmann of Boston, Massachusetts, before the Gynæcological Section of the American Medical Association last June, in which he gives rather startling figures relating to the apparent increase of sterility among American women and the decrease of fecundity among those married women who are not altogether childless. Primary sterility, together with the condition of childlessness due to miscarriage, be

declares to be, to a large extent, intentional and artificially produced among women in the United States. We need not discuss in detail his figures or his deductions, but we may point out that conditions such as those which Dr. Engelmann declares to exist, and which he naturally deplores, form an appreciable feature in modern social life elsewhere than in America, while they can hardly fail to be largely fostered and developed by the wide circulation of advertisements such as those to which we have called attention, which proclaim and trade upon the sensual aspects of sexual intercourse, encouraging the young and inexperienced to believe that they can indulge and over-indulge their passions with impunity, while those who are suffering from their imprudence are lured by specious promises of impossible or criminal "remedies" and are made easy victims to blackmail and extortion.

"IS TYPHOID FEVER INFECTIOUS?"

THIS question arose recently in the Durham County Police-court when an application was made for an order for the compulsory removal to a fever hospital of two young men. It was stated that the house in which the patients lived contained three sleeping-rooms and that 12 people lived in the house. The interest of the case lies in the fact that the chairman of the board of magistrates raised a doubt as to whether or not typhoid fever was infectious and made the following extraordinary remarks: "I remember once having considerable experience in a place where there were 100 cases. We had all the experts of the country there and they declared that it was not infectious." The worthy chairman (he was a canon) must have misunderstood the "experts." We need scarcely say that typhoid fever is not infectious in the same manner that scarlet fever is, but that unless the greatest care is taken with the excreta infection is very easily spread. Fortunately, the practitioner who had seen the cases was present in the court, and having at the request of the chairman "sworn" that typhoid fever was infectious the required order was made.

MR. CHAMBERLAIN'S SPEECH ON TEMPERANCE.

THE speech on temperance delivered by Mr. Chamberlain on Oct. 14th at Birmingham was characterised by that practical moderation which he commended to his hearers. Evidently recognising the futility of attempting to deal with any of the controversies which have gathered round this subject he concentrated his attention upon drunkenness as the real object of reforming energy. He noted the obvious impossibility of arriving at national sobriety by any process of legislation however comprehensive. The evidences of improvement observable even without the aid of trustworthy statistics during the last 70 years he attributed mainly to sanitary, educational, social, and religious influences. At the same time he admitted that legislation has its proper place also in the work of reform. He suggested that it should be employed where at present it is not—namely, for the control of licences to grocers, chemists, clubs, and the older beerhouses. He pointed out that if this is not done a diminution in the number of licensed public-houses would prove of little practical value in the interests of temperance. It is encouraging to know, however, that in Mr. Chamberlain's own city of Birmingham this process of gradually thinning out is being systematically carried on by the local magistracy. To what extent it will prove successful in the reduction of drunkenness remains to be seen. Discussions arise from time to time as to how far the presence of temptation in this form is responsible for the excess which has always been associated with it, yet there cannot be any reasonable doubt that self-indulgence in any form owes not a little in the plan of its development to the calls of temptation from without. Surely this is a matter of common experience. It is probable that a considerable number of persons, especially young persons, become intemperate, not wilfully or suddenly, but gradually by repeated and scarcely noticed concessions to desire. The lack of opportunity alone would in many such cases be enough to restrain this inclination and thus to prevent the formation of a ruinous habit. This, at all events, is the usual rule in regard to other human weaknesses; doubtless it is the rule with alcohol too. For this reason we can quite appreciate the advantage likely to accrue to the public well-being from the proposed reduction in the number of licensed houses, which has grown out of all proportion to the needs of the population. Temperance reformers have always kept this object in view, though they have not always sought to attain it by the wisest methods. In advising them to follow after it with patience, perseverance, and a due regard for common justice Mr. Chamberlain has done good service for the cause they and he, and, we will add, we ourselves also have at heart.

THE SANITARY INSTITUTE.

As will be seen in another column, the meeting of the Sanitary Institute this year was productive of many important papers, not the least valuable of which were those contributed by experts on the quality and quantity of water-supplies. Mr. H. W. Russell of the Berkshire County Council contributed two papers, the first of which related to the prevention of pollution within the Thames watershed and the second to the Thames water-supply and storage. He pointed out in the former paper the vastness of the watershed of the Thames. It comprised an area of over 5000 square miles from Banbury in the north to Haslemere in the south, and from Cirencester in the west to Leigh in the east, and in this area no stream or watercourse was allowed to be polluted by the discharge of sewage or other offensive matter under heavy penalties, supervision being managed by a staff of 18 inspectors. He pointed out the importance of securing the coöperation of local authorities. In the latter paper he maintained that the flow of the Thames was abundantly equal to the drinking requirements of the metropolis so long as provision was made for storage. He calculated that there was ample excess to provide storage for 80 or 90 days' supply for London without interfering with the requisite quantity for navigation and for keeping the channel full and flowing. Dr. H. R. Kenwood laid stress upon the importance of making a careful local investigation of all possible contaminating influences of a given source of water-supply. In the discussion that followed Dr. A. Bostock Hill urged the importance of a full analysis being made, drawing attention to the limits of bacteriological examination and deprecating reliance on a negative result. He rightly observed that the expense of analysis was often a difficulty and thus only a partial examination was often made. It cannot be too frequently insisted upon that a periodical systematic examination is better than anything even although a partial analysis is made, for there is the highest significance in the variations of composition and character of a water-supply. Mr. Thomas Caink, engineer to the city of Worcester, presented some interesting particulars in regard to the relation of typhoid fever to the purity of water-supply. He stated that he found that the typhoid fever rates in towns supplied with filtered river water were much lower, generally speaking, than those in the towns supplied from artesian wells and mountains. On Oct. 18th the annual dinner of the Sanitary Institute took place at the Holborn Restaurant when Sir Francis Sharpe Powell, Bart., M.P. Vice-president of the Institute, occupied the chair. He was supported by Sir William H. Broadbent, Sir William Church, and many well-known medical officers of health. In proposing the toast of "The Sanitary Institute and its

President, the Duke of Cambridge," he alluded to the fact that never was there a time when interest in sanitary matters was more keen than now, and the opportunities offered to the members of the Institute were very great. He rejoiced that the Institute was full of energy, and that this energy was being directed to the public welfare. They had made considerable progress and not the least important direction in which it was made was that which resulted in making the people realise the importance of the application of sanitary measures. Mr. A. Winter Blyth, in responding to the toast, said that they were not only a national society but an imperial society in the best sense of the word. He appealed for the support of a scheme for a suitable building for the Parkes Museum of Hygiene. They had raised already by promise about £7000, but at least 10 times that amount was required if they would see a building erected worthy of the museum and of the cause. There were representatives of several municipal authorities present, amongst them being the mayors of West Ham and Dover, who cordially recognised the great assistance in maintaining the public health which their respective corporations received from their medical officers of health and sanitary staff.

BAD MEAT.

ON Oct. 18th Thomas Hale of 244, High-street, Shadwell, was summoned at the Thames Police-court for being in possession of a quantity of bad meat which was intended for human food. Mr. G. H. Young, who prosecuted on behalf of the Stepney Council, stated that the defendant traded as a tripe dresser. On July 22nd Mr. Adams (a sanitary inspector) and another sanitary officer inspected the defendant's premises and found in the preparation room a quantity of diseased meat, such as liver, sheeps' tongues, brains, and hearts. They also found three pieces of tripe which were bad. In addition were found spleens and ox cheeks which were bad. Good and bad meat was mixed together. In reply to Mr. Newton, who defended, Mr. Adams stated that no bad article was found in the shop. One of his summonses had been dismissed at that court. He did not know that a chief part of the defendant's business was boiling down food for cats' meat. Mr. D. L. Thomas, medical officer of health, stated that the meat found was unfit for human food. Mr. Newton contended that there was no evidence to show that the stuff found was intended for human food. The defendant went into the witness-box and said that it was quite impossible to tell whether tripe was good for human food until it had been boiled. The meat for human food and that for cats' meat were prepared in the same room. Mr. Dickinson said that the defendant would be fined £25 and costs. Mr. Newton thereupon said that his client would appeal, whereupon Mr. Dickinson is reported to have said, "Then I will inflict the full penalty of £50 and £5 5*s.* costs, and he may appeal on that."

MALTA FEVER.

WE have received a copy of a pamphlet on Malta Fever by Dr. J. J. Curry, captain and assistant surgeon, U.S.V., Philippine Medical Service. The article is a reprint from the *Journal of Medical Research*, Volume vi., No. 1. The first portion is occupied with a report of four cases of Malta fever which were observed in the United States Army and Navy General Hospital at Hot Springs. The patients were soldiers and sailors who had returned from tropical stations. Dr. Curry remarks that the four patients were thought on admission to be suffering from chronic rheumatism. They did not improve under treatment, nor did the change to a favourable climate have any beneficial effect. In spite of treatment for rheumatism and malaria more or less regular recurrences of pain, swelling of the joints, and rise of temperature ensued. The conditions lasted a long time—from six months, the shortest, to 16 months, the longest of the series. The other prominent symptoms were anæmia, profuse sweatings, and constipation. The clinical history of the cases suggested to Dr. Curry the diagnosis of Malta fever, and the result of the serum test corroborated his suspicion. He therefore believes that Malta fever is by no means as limited geographically as heretofore has been thought, and he is convinced that the disease is widespread in tropical and subtropical regions. In the second part of the pamphlet he comments on the serum test in Malta fever, and after describing Professor A. E. Wright's method of performing the test he proceeds to give his own technique which is briefly as follows. Tubes, 7·5 centimetres long and from three to four millimetres in diameter, were made from glass tubing and the bottoms drawn out to a long sharp point. These were sterilised and plugged with cotton. Salt solution suspensions were made according to the method used by Professor Wright. The bacteria were killed by heat at 60° C. for 15 minutes, and 0·5 per cent. of carbolic acid was added. As a routine method one drop of blood serum was mixed with 19 drops of normal salt solution, then equal parts of this mixture and the salt suspension of the culture of the micrococcus melitensis were taken and placed in the small tubes with sterile pipette. This equals a dilution of 1 in 40. A reaction was called positive and complete only when, in addition to the precipitation of the bacteria in the bottom of the tube, the supernatant fluid became clear. Normal blood and the blood of those suffering from other complaints, such as dysentery and malaria, may be used as controls. These macroscopical observations may be confirmed by microscopical examinations of drops of the fluid withdrawn by means of a platinum loop. Dr. Curry does not advance this method as superior or even equal to that described by Professor Wright, but refers to it as a process which may be adopted with success.

CALMETTE'S ANTIVENENE.

THE following is an extract from a report by the medical officer of the Bengal-Nagpur Railway in India for the month of August:—

"On the night of the 23rd I was called to see a cooly woman who had been bitten by a large snake supposed to be a cobra. She was said to have been bitten at about 7 P.M. and I did not see her till two hours later. She was then practically moribund, the throat paralysed, and consciousness completely lost. All the symptoms of poisoning by colubrine venom were well marked. I injected a full dose of Dr. Calmette's antivenene, but was not sanguine as to the result, the patient's condition being apparently hopeless. The effect of the remedy was marvellous; consciousness returned in 15 minutes, and I was so encouraged by the result of the first injection that I decided to give another dose of the serum. It acted like magic and within three hours of the first injection the patient was well. Dr. Sen, my assistant surgeon, was present at the time. I have sent the notes of the case to Dr. L. Rogers, the professor of pathology to the Calcutta Medical College, and propose to also send a report to Dr. Calmette, who is, I know, always glad to hear of cases in which his remedy has been used. I am satisfied that in even desperate cases we have in Dr. Calmette's serum a really reliable remedy for the bites of poisonous snakes, and I propose to supply all assistant surgeons with a syringe and some bottles of serum. At present only this place and Chakardharpur are so supplied. I am now convinced that the case reported by me in May would in all probability have been saved had a large dose of the serum been injected and had the patient come under treatment earlier."

The value of Calmette's antivenene is generally recognised and many experiments of great interest have been performed with it. The evidence as to the nature of the substance to which its efficacy is due is very striking. When the correct relative quantities of venom and antivenene are mixed in a test-tube and after a short interval are injected into an animal no toxic symptoms follow. If the venom and the antivenene are injected separately into the subcutaneous

tissue toxic symptoms, varying in amount according to the interval between the injections, will appear; if, however, the venom be injected into the subcutaneous tissue and the antivenene into a vein of the animal no toxic symptoms will result. The facts show that the venom is much more readily absorbed than is the antivenene. It is probable that if a person is bitten and the venom is carried directly into a blood-vessel no injection of antivenene would prove of value, though, of course, it should be tried. The active constituents of both venom and antivenene are apparently proteids. Unfortunately, in most cases of snake-bite, the antivenene is not available in time to prove of use.

THE VACCINATION LEAGUE.

THE Vaccination League is an opportune movement. This association has been started, we are informed, to spread a wider knowledge of the benefits derived from vaccination and a better understanding among the general public of the advantages arising from preventive medicine and practical sanitation. The League already counts among its supporters a number of influential laymen interested in the subject, and numerous well-known medical men, including Mr. Hutchinson, F.R.S., member of the recent Royal Commission on Vaccination; Sir Alfred Garrod, F.R.S., Physician Extraordinary to Her late Majesty Queen Victoria; and Professor Charles Stewart, F.R.S., of the Royal College of Surgeons of England. The temporary offices of the League are at 110, Strand, London, W.C., where all information can be obtained from the secretary.

THE LEECH MEMORIAL FUND.

THE fund which is being raised to found a memorial to the late Dr. D. J. Leech has now reached the sum of £1230. As it is proposed to close the fund very shortly the committee will be glad if intending subscribers will forward their contributions to the secretary, Dr. E. M. Brockbank, 3, St. Peter's-square, Manchester. We are asked to state that a meeting of subscribers will be held next month to hear the committee's report. Due notice will be given of the date of this meeting and we trust to learn that when it is called the committee will have in hand a sum large enough to found a really substantial memorial. For Dr. Leech must be regarded as a foremost figure in Manchester medicine, and the profession generally owes him a large debt of gratitude for valuable work done both in scientific pharmacology and in practical politics.

CONJUNCTIVITIS AND RETINITIS FROM EXPOSURE TO THE X RAYS.

INFLAMMATION of the skin from exposure to the x rays is now well known, but cases of injury to other tissues are very rare. In the *New York Medical Journal* of Sept. 21st Dr. J. W. Sherer has published a case in which conjunctivitis and incipient retinitis were apparently produced by repeated exposure to the x rays. A medical practitioner, aged 29 years, who had been daily exposed to these rays for three and a half years, was seen on Oct. 11th. About six months previously his eyes became sensitive to sunlight and the ocular muscles were unduly fatigued by near work. Slight conjunctivitis had just appeared. Vision was normal. The discs were slightly blurred and the fundi were abnormally red. A 1 per cent. solution of nitrate of silver was prescribed for the conjunctivitis, to which it quickly yielded. When the patient was seen again, on Nov. 10th, desquamative dermatitis, accompanied by bronzing, had appeared on the face—a condition characteristic of the action of the x rays. The eyebrows and eyelashes were almost completely lost. The conjunctivitis had recurred, but was limited to the lower lids. The fundi were much more congested and reddened. The discs were much blurred. The eyelids were then protected by steel plates with plate-glass windows. The conjunctivitis and retinitis disappeared in about a month. Nine months later the fundi were normal and the eyebrows and eyelashes were growing again and there was only a trace of redness in the conjunctiva. It is of interest that of three cases of cancer in the eye treated by the patient with the x rays in which 75 sittings were given irritation of the organ occurred in only one. In a fourth case in which 37 severe applications were made ulceration of the cornea occurred. Dr. King of Toronto has reported a case of conjunctivitis, loss of eyebrows and eyelashes, desquamative dermatitis, and exfoliation of the hair and nails from the x rays.

MEDICAL SERVICE AT ST. PAUL'S CATHEDRAL.

THE annual festival service in connexion with the Guild of St. Luke was held at St. Paul's Cathedral on Thursday, Oct. 17th. There was a very large congregation and a good proportion of the seats under the dome was reserved for those members of the medical profession who attended in their academic robes. The musical portions of the service were sung by the special choir of the London Church Choir Association, under the direction of Dr. H. Walford Davies, organist of the Temple Church and honorary conductor to the association. The setting of the Magnificat and of the Nunc Dimitis was Stainer in B flat; the anthem "Lead, kindly Light," was also sung to Stainer's setting, the exquisite rendering of which (as, indeed, the whole service) reflected the greatest credit upon conductor and choir alike. The lessons, which had special reference to the healing art, were read by the Rev. W. H. H. Jervois, Vicar of St. Mary Magdalene, Munster-square, W., and the prayers were intoned by Minor Canon Tapsfield. Canon Gore was the preacher, and in an eloquent sermon, founded upon Eccles. ix. 17, he drew an analogy between the priesthood of theology and the priesthood of medicine, both having to deal largely with ignorance and sin, men frequently looking to the physician to escape the penalty of their misdeeds. He urged his hearers to live up to the responsibilities of their profession, and instanced the life of the late Sir James Paget as one worthy of emulation.

INFECTION AFTER DEATH.

WE have received a letter from a correspondent, presumably an American, stating that in his opinion there is a source of danger in the propagation of disease which in this country is entirely overlooked—namely, infection from the bodies of those persons who have died from an infectious disease. To remedy this he suggests that all funeral carriages of whatever class should be lined with wood or some material such as lincrusta, so that the inside of the vehicle could be easily washed. The upholstery fittings should be so arranged that they can be easily removed. Further, he urges that the undertakers' clothes and those of all the attendants should be disinfected and the "men wash with disinfecting soap." He concludes by saying that "this system is not generally adopted in America, but where it has the results have been most satisfactory. The public run great risks in coming in contact with undertakers without this precaution." It would be interesting to know the data on which our correspondent bases his conclusions. We believe that he has immensely exaggerated the dangers which he mentions, and we are not aware that disease has ever been shown to spread in the manner he suggests. We should certainly advise, in the case of death from an infectious disease such as small-pox, that the body be enveloped as speedily as possible in cloths wrung out in some disinfectant solution, and that the coffin should be closed early; these precautions having been taken we do not

agree with our correspondent that "the public" would run great risks in coming into contact with those whose duties necessitate their removing dead bodies. A plan such as we have suggested is particularly important in dwelling-houses where many people are crowded together. Amongst certain classes it is the custom to ask their neighbours to view the body of the deceased; such a custom cannot be too strongly deprecated. In some districts capacious mortuaries have been established for the reception of dead bodies until arrangements are made for their interment and certainly such a course should be made obligatory in those cases in which the body has to be retained in rooms where surviving members of the family have to sleep or to live.

SMALL-POX IN LONDON.

DURING Monday, Oct. 21st, 10 fresh cases of small-pox were admitted to the hospitals of the Metropolitan Asylums Board; during Tuesday, Oct. 22nd, there were five fresh cases; and during Wednesday, the 23rd, there were five fresh cases. The Local Government Board have issued a circular to the Metropolitan Boards of Guardians saying that "in view of the outbreak of small-pox in London they think it desirable to draw the attention of the guardians to the circular letters addressed to them by the Board on Feb. 21st, 1893, and July 30th, 1895. Portions of these letters and the remainder of the circular run as follows:—

> There is no doubt that there is considerable risk of small-pox being spread by means of casual paupers, and the Board trust that the guardians and their officers will take such measures as will tend, as far as possible, to diminish this danger.
>
> The Board must, at the same time, observe that when a case of small-pox occurs, whether in the casual wards or in the workhouse, and, indeed, in times of small-pox prevalence generally, it is, in the opinion of the Board, of the greatest importance that measures should without delay be taken to secure, as far as practicable, vaccination or re-vaccination of the other inmates, so far as the medical officer may consider needful. Care should especially be taken that the officers and other persons employed in the casual wards or brought into personal contact with a case of small-pox, if they have not within a sufficiently recent period been either successfully re-vaccinated or had small-pox, should at once be re-vaccinated as a protection against the disease.
>
> The Board request that whenever there is an occurrence of small-pox or any other dangerous infectious disease in a workhouse, including any case occurring in the casual wards, a report of the fact may be made to the Board by the medical officer, the report being accompanied by a statement showing for each case the date of attack and source of infection, so far as may be known. This report should be made in addition to the immediate notification of the case to the medical officer of health.
>
> In their letter of July 30th, 1895, the Board further expressed a desire that the medical officer would, in reporting any case of small-pox as requested above, state what provision had been made for preventing the spread of the disease among the inmates and for the isolation and nursing of the patients whilst they remain under his charge. The Board wish that this desire should be complied with, and that in the case of small-pox occurring the medical officer should fully inform the Board of such measures as may be taken with regard to vaccination and re-vaccination.
>
> I am directed to request that the guardians will be good enough to place a copy of this circular in the hands of the medical officer, the master of the workhouse, and the superintendent of the casual wards.
>
> I am, Sirs, your obedient servant,
>
> S. B. PROVIS, Secretary.

This circular is by no means unnecessary. Boards of guardians like the London School Board are popularly elected bodies, and their members go upon the principle of conciliating what they call "the people," meaning thereby not the hard-headed common-sense working-man and ordinary middle classes, but the fools and faddists of every degree. Hence the action of the London School Board in putting every obstacle in the way of public vaccinators exercising "tyranny" and "compulsion," or, in other words, looking at a child to see whether it may or may not be ill. Hence, too, the pigheadedness shown by the Hackney Board of Guardians with reference to the same matter. As to revaccination, it is of little use for the Local Government Board to say that care should be taken that certain persons should at once be revaccinated, when the Government have acted in the regrettable way that they have as regards this very question of revaccination. Lord Harris, on behalf of the Government, practically promised that a Bill dealing with this subject would be brought in during the session following that in which the Vaccination Bill of 1898 became law. From that day to this the Government have never said a word as regards revaccination.

THE ELECTION OF DIRECT REPRESENTATIVES UPON THE GENERAL MEDICAL COUNCIL.

Mr. Victor Horsley, Mr. George Brown, Dr. S. Woodcock, and Mr. George Jackson are announced to speak at a meeting to be held to-day (Saturday) at 3.30 P.M. at Newcastle, Mr. Rutherford Morison in the chair. Dr. J. G. Glover was also invited to address the meeting, but owing to indisposition will be unable to be present.

UNIVERSITY COLLEGE MEDICAL SOCIETY.

AT the opening meeting of the University College Medical Society held on Oct. 16th at University College, London, the chief event of the evening was an interesting discourse by Mr. Christopher Heath, entitled, "Fifty Years of Medical Life." The presence of many ladies in the audience supplied Mr. Heath with an opportunity which he did not fail to utilise of drawing attention to the great change that had taken place in the medical world concerning the question of the admission of ladies into the profession of medicine. Referring to his experience in America a little while back when he delivered the Lane Lectures in San Francisco Mr. Heath said that the lady students were quite equal to the men in aptitude and attention. He remembered the great controversy as to whether women should be allowed to study medicine at all, and he recalled how Miss Garrett, who was now well known as Mrs. Garrett Anderson, was in great difficulty as to where she could study, and she applied, among other places, to Westminster Hospital, where he was then attached, to ask if she could receive her medical education at that institution. The staff held a solemn meeting, presided over by an old bachelor, and the unanimous opinion arrived at was that they were unable to comply with the request because if they taught ladies they would not be able to teach gentlemen. At the present time the School for Ladies at the Royal Free Hospital was justly recognised as a great success. Mr. Heath concluded his reference to lady doctors by describing how he went over a certain infirmary where one of the medical posts was held by a lady. In answer to his inquiries he was told that she had the entire care of all the female patients, did all the dispensing, and kept all the books. That seemed rather an unfair division of labour and appeared a somewhat unjust way of treating a lady practitioner. Mr. Heath was only 16 years of age when he persuaded his father that he had had enough of school and entered at King's College Hospital. He had to wait, however, till he was 21 years of age before qualifying. In those days there was no entrance examination before becoming a medical student and he recollected how profoundly ignorant some of the men were. At the present day, of course, students had to pass a preliminary examination of a reasonable character, but he was afraid in the hurry and rush of passing the numerous examinations now imposed that men quite forgot that there were such things as British classics. Medical students, he said, did not read Dickens, they did not even know Thackeray, and as for studying Shakespeare, that was out of the question. He thought it was a pity that that kind of culture had entirely gone out of fashion. Nowadays, if a man knew a little Latin, a little mathematics, and had a slight smattering of French and German, he at once became quite a superior person. In regard to learning anatomy there were no sections in his early days such as there were now in every museum in London, and it was rather a struggle in those days to learn anatomy. There was one feature of his student days which Mr. Heath said he regretted had been

altered and that was that the students were then urged to attend the hospital practice every day. Now until a man had passed his anatomy and physiology he was forbidden to go into the wards. Mr. Heath took credit for introducing an improvement in the manner of tying ligatures, for changing the description of the fibula which was formerly described as a three-sided bone, and for showing how to stop hæmorrhage in operations on the tongue. No one, said Mr. Heath, had yet arrived at the end of his instruction; his studentship, he was happy to say, was still going on although he had completed 50 years of medical life.

EARL GREY'S PUBLIC-HOUSE TRUST MOVEMENT.

PERHAPS no movement in favour of temperance has evoked a more intelligent interest than that conducted by the Public-house Trust Association. The title does not suggest a revolutionary or a Utopian inspiration, and the plan of operations as described in the first report of the association is deliberate and businesslike. Its great aim is to eliminate private interest from the retail trade in liquor and to place that trade in the hands of limited companies which shall conduct it on temperance principles as a public trust. The return to shareholders is limited to 5 per cent. and all surplus revenue is devoted to objects of local or national benefit other than those chargeable to the rates. Managers are appointed to the public-houses owned by the association and are paid a fixed salary. No profit on intoxicants is allowed to them, but they receive a percentage of profit on the sale of food and non-intoxicants. These public-houses being strictly restaurants are bound to supply non-alcoholic beverages and food as well as beer, wine, or spirits, all of guaranteed quality, and they must be managed with full consideration for order, cleanliness, and the public comfort. Drunkenness will not be permitted and the licensing laws for the regulation of public-houses will be strictly enforced. No attempt will be made to push the sale of alcoholic drinks, but every means will be used to present food and non-intoxicants in such a way as to encourage their consumption. The association proposes to accept all new licences which may be issued and to undertake the control and administration of all public-houses thus established. Many land-owners have also placed licensed premises on their property under the control of the association and it has been found that existing licences can be purchased for its purposes from time to time on favourable terms. As illustrating the share taken by local self-help in such transactions we may mention that a public-house at Cowdenbeath, Fifeshire, has been acquired by the miners and workmen of this district with the help of the association and in conformity with its objects. Already 14 branches of the association have been formed, six in England, six in Scotland, one in Wales, and one in Ireland. The People's Refreshment House Association, moreover, an older and allied organisation, manages 14 licensed houses on similar principles. It is intended that a Public-house Trust Company shall be formed in every county and shall be represented on a central executive council. The progress made so far in this direction is certainly encouraging and we can only regard this fact as one of the surest evidences of an increasingly healthy national opinion on the whole subject of alcohol in relation to temperance. It is significant that several of our colonies have set up a closely similar ideal in dealing with this question. The recently founded South African Alliance which has its headquarters in Johannesburg looks to Government control in one form or another and its substitution for private interest in the retail trade in intoxicants as the only generally applicable means of temperance reform. South Australia goes a step further and would have the trade owned, regulated, and carried on by the Federal Government. The Natal Legislature has passed a measure enabling any borough to acquire the exclusive right of retailing intoxicating drinks within its limits. The plan suggested by this enactment comes nearer to that of the Public-house Trust Association than either of the others, and we cannot but think that in both cases administrative independence of State control is an advantage alike to the State and the reforming societies. In young communities the importance of this point may not be easily realised, but there comes a time to all growing States when expansion brings with it great extension of political responsibility, and then it is felt that social questions are best entrusted to the hands of municipal or other local councils. Such movements as that of temperance reform should rather be fostered than directed by the State, but they undoubtedly deserve all reasonable encouragement. This we do not doubt will be accorded alike to the efforts of the Public-house Trust Association and of the different colonial alliances.

THE AFTERNOON LECTURES AT THE BROMPTON HOSPITAL.

THE lectures to be delivered during the coming winter session at the Brompton Hospital for Consumption and Diseases of the Chest are of particular interest. The opening lecture was delivered on Wednesday last by Dr. Theodore Williams who took as his subject "The Prognosis of the Different Forms of Pulmonary Tuberculosis" and treated it with the thoroughness that might be expected from his long experience. These lectures at the Brompton Hospital are free to all qualified medical practitioners as well as to the students attending the practice of the hospital, but we doubt whether their value is sufficiently recognised by the medical profession. As illustrative of the lectures the most valuable clinical material is shown, and the special points of diagnosis are demonstrated by men who have made exhaustive study of their subject. The treatment of phthisis is a matter of first importance to all medical practitioners, and we cannot help being surprised that the opportunities for learning new things and for refreshing acquaintance with old things that are offered by the lectures at the Brompton Hospital are not more freely taken advantage of. Very large audiences could hardly be expected, because the medical profession is a busy one, but we certainly think that the lectures at Brompton might receive more support than they do.

PAUPER CHILDREN AND CLEANLINESS.

ACCORDING to the *Daily Telegraph* the gentleman charged with the periodical inspection of Hendon Workhouse has made certain suggestions to the board of guardians as the result of a recent visit to which the board, through its chairman, has pledged itself to give careful consideration—suggestions which are worthy of the consideration of similar bodies throughout the country. He recommends among other things that each child in the workhouse should be supplied with a separate towel, toothbrush, hairbrush, and comb, and that they should all be provided with night-dresses. He also advises that a dentist should be engaged to examine and attend to the children's teeth once in every quarter. The shock of such innovations, had they been made on behalf of Oliver Twist, would have brought Mr. Bumble's career to a premature close to the disappointment of novel-readers, but they are really sanitary precautions rather than the pampering of pauper children, many of whom will probably regard them as irksome additions to the discipline which rules their lives. The common use of towels, hairbrushes, and combs must obviously promote the spread of those epidemics which are not easy to prevent altogether

where children are congregated, while the need for use of the toothbrush and the visit of the dentist are equally real. It is well known that unsound teeth constitute one of the principal causes of the rejection of recruits for the army and navy, while the necessity for the precautions taken on enlistment has been emphasised by the requests for pocket mincing machines for our soldiers and sailors engaged in the South African campaign. Soldiers and sailors are of course not the only section of the community to whom inability to masticate hard foods causes inconvenience and ill-health in after life, which inability care when young would minimise or prevent.

LONDON FOGS.

IN the report of THE LANCET Special Analytical Sanitary Commission on Smoke Prevention and Perfect Combustion which was published in THE LANCET of Nov. 25th, 1893, p. 1326, appears the following sentence: "If this enormous increase [of gas] can be successfully grappled with at a single day's notice and maintained for several days (it is often only a few hours' notice for there are no means of ascertaining the precise moment when fog appears or when the temperature will suddenly fall), it is evident that even the existing plant, both manufacturing and distributing, is equal to the increasing requirements necessitated by the application of gas for purposes other than those of lighting." Those remarks were made in connexion with the proposal to substitute gas for coal for domestic heating purposes. The report referred to related to an inquiry undertaken to show that the introduction of gas as a general heating agent was not only practicable, but that if a system of gas-heating could be universally adopted one of the worst factors concerned in the production of smoke and fog in the metropolis would be overcome. In other words, the inquiry was undertaken in the interests of public health. Since the publication of this report it just happens that the severity and frequency of London fogs have steadily diminished according to the meteorological authorities who are inclined to attribute this fact to the increasing use of gas for heating purposes. Apparently the public health aspect of the matter has never appealed to our public authorities sufficiently to arouse them into an active state of inquiry directed to the suppression of the smoke evil, but an inquiry is now promised which has been prompted, oddly enough, by the representations of electric and gas-lighting companies. It might be thought that it was congenial to the interests of the directors and shareholders of public lighting companies that fog should remain. The demand for artificial light is greater than ever, chiefly on account of the enormous expansion of the inhabited areas in and around the metropolis. The supplying companies can cope readily enough with this demand in normal times, but on the advent of sudden darkness, as by fog, of which they have no means of obtaining warning, their resources, as many of our readers to their discomfort and inconvenience know too well, are strained to the utmost. And this fact has led the companies concerned to appeal to the Meteorological Office for a system by which special forecasts or warnings of the approach of fogs could be issued to them. There are doubtless a good many people in addition to electric supply and gas companies who would gain by being put in touch with warnings of this kind. It matters little by what channel an end is obtained or who attains it so long as the result is good and of service to the country. We had hoped that the question of London fogs would have been seriously approached from the public health standpoint, but that it is going to be approached from the standpoint of expediency does not after all matter, for the inquiry is calculated to add to our knowledge of fogs and their formation, and recommendations will surely suggest themselves as the outcome of the inquiry as to the steps that might be taken to minimise the evil. We recognise the good work being done by the Coal Smoke Abatement Society, a work that is only imperfect for the want of funds. The Meteorological Office have communicated with the London County Council, and the General Purposes Committee have practically agreed to coöperate with the meteorological authorities. The subject of inquiry will be the occurrence and distribution of fogs in the London district and their relation to other atmospheric and local conditions. It is now proposed: "(1) That a gentleman of suitable scientific qualifications be engaged by the Meteorological Council for a limited period to formulate instructions and a scheme of observations and to conduct the investigation; (2) that the observations be taken at the various fire brigade stations and by men of the Fire Brigade, and also if it can be so arranged at other institutions of the London County Council; (3) that the returns be sent from the various stations and from any other institutions selected directly to the Meteorological Office; (4) that the Meteorological Council do arrange with the police authorities for observations to be taken at selected positions outside the County of London; (5) that all responsibility as to the conduct of the investigation and any published results of such investigation do rest with the Meteorological Council; (6) that a copy of the complete returns and 12 copies of a report thereon by the Meteorological Council be supplied to the London County Council; and that the London County Council do contribute a sum of £250 for the investigation." It is reported that these proposals, which were accepted by the London County Council at its weekly meeting held on Oct. 23rd, represent a satisfactory and practical arrangement and that the Fire Brigade Committee will raise no objection, and that the chief officer of the Fire Brigade is prepared to conduct the work also as far as the brigade is concerned, provided that the instruments intended to be used for the observations are the ordinary hygrometric instruments, such as are used in the Royal Navy. We should like to add one other recommendation and that is, that the officers of the Coal Smoke Abatement Society, presided over by Sir William Richmond, should be asked to give their assistance in this matter. We are sure that they would be perfectly willing to do so, and they are in possession of interesting and valuable statistics germane to the inquiry. The results will be looked forward to with interest and everybody will wish the inquiry to be brought to a successful issue, so that our electric lighting and gas companies need not be worried to meet the demands for extra light necessitated by the onset of fog, and that some means will be found by which the formation of black stifling fogs may be to some extent prevented. Mists are inevitable in this climate in the winter, but it should be an offence everywhere to blacken them with smoke. Artificial light is a necessity, but it is as nothing compared with the necessity of pure air and an undarkened day.

STATE CHILDREN IN AUSTRALASIA.

A PAPER read before the State Children's Association by Miss Hilda Martindale gives an interesting account of the methods of dealing with orphan and neglected children in South Australia under the State Children's Act of 1895. A council consisting of six ladies and six gentlemen has been appointed with power, subject to the approval of the Governor, to provide and to supervise institutions for the care of State children, to board out and to grant licences, and to control lying-in homes, funds being voted by Parliament. The children thus provided for are those destitute, neglected, or convicted. Any constable may without a warrant bring any child who appears destitute or neglected before the justices, who may then order him

to be sent to the receiving depôt at Adelaide, where several cottages are provided for the purpose. A room is set apart at the office of the council where the magistrate attends to deal with neglected children and juvenile offenders, the parents being summoned to be present. Thus the children do not come in contact with the police-courts or with paupers. The justices can order a child to be detained at an institution till the age of 18 years. In June, 1900, the department had control of 1248 children, of whom 1016 were either boarded out, placed at service, or adopted; 57 in the receiving depôt; 12 in hospitals or in asylums for the blind or imbecile; and 125 in reformatory homes. One of the most important differences between the legal provision for destitute children in South Australia and that in England appears to be the difficulty which is met with by the Poor-law guardians among us in dealing with the "ins and outs," or children removed from schools by pauper parents for their own purposes—a practice which frequently cancels any effort in training to habits of industry and thrift. The provision of receiving depôts for children apart from the workhouse, and special magisterial courts for dealing with juvenile cases, and the power of detention up to the age of 18 years in the case of children of unworthy parents, suggest reforms that might well be introduced into this country by the Local Government Board. We think, however, that the methods of the Australian courts should be improved by the requirement of a medical examination in every case before commitment; the fact that 1 per cent. of the children received are placed in hospital or asylums shows that "defective children" are as frequent in Australasin as among our own population.

THE DIRECTOR-GENERAL AND THE DEPUTY DIRECTOR-GENERAL OF THE ARMY MEDICAL SERVICE.

THE King has approved of the appointment of Surgeon-General W. Taylor, C.B., to be Director-General of the Army Medical Service, and on the retirement on Dec. 31st of Surgeon-General H. S. Muir, C.B., Lieutenant-Colonel A. Keogh, C.B., will take over the duties of Deputy Director-General, with the tempory rank of Surgeon-General. Surgeon-General W. Taylor, C.B., joined the Army Medical Staff in 1864 as assistant-surgeon; he became surgeon in 1873, surgeon-major in 1876, brigade-surgeon in 1890, surgeon-colonel in 1895, and surgeon-major-general in 1896. He served with the Jowaki Afridi expedition in 1877, receiving the medal, and with the Burmese expedition in 1885-86 on the staff of the Commander-in-Chief in India, for which he was mentioned in despatches and received the clasp. During the Japan and China war in 1894 he was attached to the headquarters of the Japanese army and received the Japanese war medal. He served with the expedition to Ashanti under Sir Francis Scott in 1895 as principal medical officer with the force, and for his services on that occasion he was promoted to surgeon-general and was granted the Queen's Star. In the Soudan campaign under Sir H. (now Lord) Kitchener, in 1898, he also served as principal medical officer and was present at the battle of Khartoum. He was mentioned in despatches and received the distinctions of C.B., of the Medjidie (second class), as well as the British medal, and Khedive's medal and clasp. Lieutenant-Colonel A. Keogh was a member of Mr. Brodrick's Committee which was appointed to consider the reorganisation of the Army Medical Services. He entered the service in 1880 and reached the rank of lieutenant-colonel in 1892 and brigade-surgeon-lieutenant-colonel in 1900. He served in South Africa with the rank of colonel, and for his services there was made a Companion of the Order of the Bath. We congratulate these gentlemen on their appointments and the department upon having secured good men to do the arduous work that lies before it. Nor would we lose the opportunity of saying a few words of adieu to the late Director-General, Surgeon-General J. Jameson, C.B., and the retiring Deputy Director-General, Surgeon-General H. Skey Muir, C.B. Upon Surgeon-General Jameson, who was throughout ably assisted by Surgeon-General Muir, was thrown all the responsibility of preparing the medical arrangements for the South African war, and, as far as the methods of the War Office and the exigencies of actual campaigning allowed, his enormous labours were successful. He has so far gone unthanked, but he may be certain that his professional colleagues know the value of his work and will not allow the public to forget it.

THE DISTRIBUTION OF PLAGUE.

A TELEGRAM from the Governor of the Cape of Good Hope, received at the Colonial Office on Oct. 17th, states that for the week ending Oct. 12th there were no cases of plague in the Cape Peninsula. At Port Elizabeth the cases were: coloured persons, 1; Chinese, 1; natives, 1. The deaths from plague were as follows: Cape Peninsula, 0; Port Elizabeth, 1 (a European). The area of infection remains unchanged. There were no cases of plague in persons under naval or military control. As regards the Mauritius a telegram from the Governor, received at the Colonial Office on Oct. 18th, states that for the week ending Oct. 17th there were 57 cases of plague and 36 deaths.

DISCRIMINATION IN CHARITY.

DR. T. D. ACLAND is to be congratulated on the prompt and efficient steps which he took to discover the circumstances in which Mr. William Dyer Frazer, an old pupil of his, believed by him to be in South Africa, appeared to be soliciting alms from an address at Brighton. As a sequel to Dr. Acland's investigations, one Robert Wilson was speedily haled to the police-court, charged with personating Mr. Frazer, and was committed for trial. The trial took place at the Old Bailey on Tuesday last, and Robert Wilson, ex-postman, was sentenced to three years' well-deserved penal servitude. We congratulate the Medical Defence Union, who undertook the prosecution, on the result. The prisoner was shown in the evidence to have obtained several sums of money from medical men by like fraudulent methods, and was certainly unfortunate in the selection of the last intended victim to whom he addressed himself, for in addition to the personal acquaintance and interest taken in Mr. Frazer by Dr. Acland, Sir William Mac Cormac was able to show a letter which he had received to a brother-in-law of the supposed mendicant, Mr. H. C. Crouch of 55a, Welbeck-street, London, W.; but in any case the course he was pursuing was bound in the long run to lead to detection. Medical men are so frequently the victims of impostors that it may not be out of place to point out to them the possibility as well as the wisdom of making inquiries where persons claiming to be members of their profession make this a reason for demanding their sympathy and assistance. The career of the future medical practitioner is one with which many are necessarily acquainted long before his name appears upon the Medical Register, and every stage of it is recorded, while from the date of his registration as long as he continues to practise his life is lived more or less in contact with his professional brethren and before the eyes of the public. Inquiry is therefore almost always possible, and although prompt attention to the request made may at first seem the only way to relieve pressing need the truest kindness may be that of him who takes the trouble to learn all the facts which have given rise to the appeal before him. To relieve effectively where real need exists is to exercise charity; to give indiscriminately without taking further trouble in the matter is at

best to apply a palliative that is no remedy, while at the worst it rewards imposture.

VACCINATION PROSECUTIONS IN LEICESTER.

ON Wednesday last the Leicester borough bench dealt with proceedings instituted by the vaccination officer of Leicester against Mr. Herbert Moore, the parent of an unvaccinated child, under Section 29 of the Vaccination Act of 1867. In defence an elaborate argument was set up, which rested mainly upon two contentions, the first that the vaccination officer should have received the instructions of the board of guardians before taking action, and the second that it is essential to the case for the prosecution under this section that the fact of the public vaccinator having visited the home of the child and having offered to vaccinate should be proved. The justices by a majority decided in favour of the prosecution and imposed a penalty, whereupon the defendant's counsel asked that a case should be stated for the opinion of the High Court. This application was acceded to by the bench, and the result of the appeal will be watched with interest. The practice of raising technical objections such as these before magistrates has become extremely common, and in some places has reached such a pitch that, however straightforward the facts of his case may be, the vaccination officer is obliged to appear by counsel or solicitor, with the result that the ratepayers are saddled with much unnecessary expense, while quite a number of witnesses, professional and other, who can ill spare the time, are constantly compelled to be in attendance. The sooner, therefore, that these questions are authoritatively decided by the courts and the proper procedure determined by binding authority the better for all concerned. Meanwhile, we trust that the Local Government Board will not relax its efforts to obtain compliance with the law in Leicester. Recent letters to local papers, we observe, protest loudly against "tyranny," "coercion" and the like, but it is hard to understand what tyranny can be involved in requiring obedience to the existing vaccination law when certificates of exemption can be had at Leicester practically for the asking. Anti-vaccination leaders in Leicester at present work hard to dissuade parents from taking out these certificates—a fact which suggests that they themselves realise the increase in vaccination that is likely to result as soon as the citizens come to understand that they cannot escape from the legal obligations which the Vaccination Acts still impose upon them.

SMALL-POX AMONG HOP-PICKERS.

IN a report on an outbreak of small-pox within the borough of Finsbury, Dr. George Newman, medical officer of health, states that 10 cases occurring at the end of September were attributable to infection derived from some hop-pickers' huts on a farm at Northlands, Bodiam, Sussex. We have already referred to the incident in our issue of Oct. 5th, p. 924, but Dr. Newman's report gives further details as follows. A girl from Finsbury who arrived at this farm on Sept. 1st was taken ill on Sept. 10th; spots appeared on her face on Sept. 13th, and on the 15th she returned to London, where she was seen on the 16th and 17th by a medical man who was reported to have said that she was suffering from chicken-pox. She lived in Thomas-street and on Sept. 18th a woman in the same house was notified as suffering from small-pox. Dr. Newman infers that both the woman and the girl contracted small-pox at the end of August. On Sept. 23rd and 24th three children of a hop-picker fell ill on the farm at Northlands, and on being brought to London they were found to be suffering from small-pox. On visiting the home of these people in Vineyard-walk on the 28th Dr. Newman was told that there were several similar cases at the farm, and that all the hop-pickers in that district were returning to London that night. The South-Eastern Railway Company having been communicated with afforded facilities for examining all the hop-pickers arriving during the afternoon and evening at Charing-cross, Waterloo, Cannon-street, London Bridge, and New Cross railway-stations. Hundreds of these passengers were examined by a party consisting of Mr. Shirley F. Murphy, Dr. W. H. Hamer, Mr. Spon, Mr. Gabb, Mr. Evan Jones, and Dr. Newman. At Cannon-street station at a late hour Mr. Evan Jones was successful in waylaying five cases of small-pox, all belonging to Finsbury, and these patients were immediately removed to the hospital ships.

"PAPER AS A WRAPPER."

OUR attention has been drawn to an article in the *British Baker* on "How Small-pox and Other Diseases are Spread," in which the writer very properly condemns the practice of wrapping up articles of food such as loaves of bread in any sort of paper without reference to its previous history. It is stated in particular that shavings taken from a biscuit tin have been recognised as having been cut from bookbinders' parings and other secondhand paper that has been handled and exposed to contamination. "Waste paper finds its way to paper and rag stores where it may have all manner of abominations in close proximity; it is then picked out, cut into shavings, and we next see it placed on the top of biscuits to fill up the tins." We heartily agree with the *British Baker* that this highly objectionable process should be stamped out by the employment of clean and specially treated shavings. It may be noted that we ourselves pointed out in THE LANCET of June 22nd, 1901, p. 775, in an article entitled "Paper as a Wrapper," that very little discrimination, as a rule, was exercised as to the quality or kind of paper used for the purpose of wrapping articles of food. Although we were able to show that the newspapers of London so frequently used for wrapping up articles of food were free from irritants or poisonous mineral substances or dyes, yet we wrote that "the ubiquitous organism is bound to be present and not unlikely it may be a pathogenic one considering the dirty environment under which waste newspaper is frequently to be seen." We are glad to note that others are taking up this important question.

MR. MALCOLM MORRIS, the secretary-general of the British Congress on Tuberculosis, was entertained at the Café Royal recently by the secretaries of committees and sections, under the chairmanship of Mr. Cutler, honorary secretary of the architectural museum. Fourteen out of 19 secretaries were present, and the opportunity was taken to present Mr. Morris with a dining-room chiming clock as a memento of his labours.

THE Lettsomian Lectures of the Medical Society of London will be delivered by Mr. A. Pearce Gould on Feb. 17t and March 3rd and 17th, 1902, at 9 P.M., the subject being, "Certain Diseases of the Blood-vessels." The annual oration will be delivered on May 26th, 1902, by Dr. Stephen Mackenzie.

WE understand that Sir Joseph Dimsdale, M.P., the Lord Mayor Elect, will preside at a meeting to be held at the Mansion House in January to aid the appeal of Guy's Hospital for a renewal of public support. A sum of £180,000 is required to meet the cost of renovation and extension.

THE KING has commanded that in future the Dental Hospital of London shall be known as the Royal Dental Hospital of London. The new hospital is now finished and in full working order and funds to reduce the debt on the

building fund are earnestly solicited and may be sent to the secretary.

THE annual distribution of prizes at St. George's Hospital Medical School will be made in the board-room of the hospital by the Right Honourable the Lord Chief Justice of England on the afternoon of Monday next, Oct. 28th.

WATER-SUPPLIES AND RIVER POLLUTION.

A CONFERENCE on Water-supplies and River Pollution organised by the Sanitary Institute was held on Oct. 16th and 17th at St. Andrew's Hall, Newman-street, London, W. The Conference was numerously attended by representatives of sanitary authorities from all parts of the kingdom. Under the chairmanship of Professor H. ROBINSON the Conference discussed on Oct. 16th the Sources of Supply and Watershed Areas, Storage, and Town and Village Supplies. The first three papers on the programme were taken together for discussion.

The first paper was by Mr. J. PARRY, M.I.C.E., on the Protection of Watersheds. The author's conclusions were that if water-supplies were to be protected against the risks of all pollutions prejudicial to health which modern science had revealed the sources of supply, including the entire area over which rain was collected, must be owned by the authority responsible for the waterworks and be managed solely in the interests of the water-consumers. These drainage areas need not be left barren; they could be used for sheep-farming, plantations, and deer parks which would give some return for the money spent in purchasing the drainage area and would satisfy every reasonable demand in regard to the purity of the water-supply.

Dr. E. C. SEATON (medical officer of health of Surrey) contributed a paper on the Protection of Underground Sources of Public Water-supply. He divided the subject into protection against waste and protection against local contamination. He detailed what the Surrey County Council had done in preventing attempted encroachments on local resources for the purpose of insuring a water-supply for London and in adjusting the various needs of the different localities in the county. On the subject of contamination the Maidstone and Worthing experiences aroused uneasiness concerning the safety of certain underground sources of supply. The term "nuisance dangerous or injurious to the public health" should be extended in its application.

Mr. CLAYTON BEADLE communicated the third paper, entitled, The Rights of Underground Pumping in Relation to Flow of Neighbouring Streams. His paper consisted of observations by Mr. Beadle on the depletion for the last 20 year of the river Cray in Kent by the pumping stations at Orpington and Crayford.

Professor ROBINSON, in opening the discussion, said that the causes of pollution could be obviated in a more or less degree. Artificial waste of water should be stopped and natural waste should be utilised.

Mr. R. H. WYBILL (Swansea) considered that better supervision of the catchment area was necessary.

Mr. J. E. BUSH (Melksham) urged that representative authorities should control the water-supply areas. The water-distribution should be in the hands of the county council and pumping-stations for purposes of private and commercial profit should not be allowed.

Mr. W. J. BURGESS (Liverpool Water Committee) said that in many towns the purity of the water-supply was not paid sufficient attention to. It was rarely or never possible to adequately prevent the contamination of wells near sewers and rivers were not much better. The condition of the London water-supply was a danger to the inhabitants of the metropolis and afforded a bad example to other places. Water-supplies should be under the control of public bodies.

Mr. CASTLE (Garfield, Yorkshire) described how the sinking of a pit was a source of waste of water by draining almost every well in the district.

Mr. J. SIDDALLS (Tiverton), who represented a rural district, explained that there should be some new authority to adjust the divergent interests between the large urban and the rural districts. Local wants should be supplied before those outside the district were afforded opportunities of securing water.

Mr. J. FREER (Leicestershire County Council) agreed that the inhabitants of any particular catchment area had a prior right to the local water-supply. What was required was some authorised body who could deal with the watershed areas.

Mr. T. R. SMITH gave some facts concerning the control by the local authority of Kettering over their water area.

Mr. F. VERNEY (London County Council) said that the catchment area for the metropolitan water-supply was becoming more and more tainted every year through the increase of population and high farming. The supply of water for London should be obtained from some source not nearer than the mountains of Wales where absolute purity could be relied upon. London water was well filtered but the public health should not depend upon that.

Several speakers from the body of the hall protested against attacks on the purity of the London water-supply.

Mr. LYONS WALCOTT (Middlesex County Council) urged that districts near large towns required protection for their water-supply.

The next paper was on Rainfall and Population of England and Wales in Relation to Water-Supply, by Dr. H. R. MILL. Dr. Mill concluded that there was rain enough to satisfy the demands likely to be made for water. He did not think that the possibility of failure in supply was at all in question. The cost, however, would be serious and might be prohibitive. Economy was therefore necessary and waste of the water-supply should be carefully guarded against. It was the abuse and not the use of the water that caused anxiety. No district should be able to claim for its own all the rain-water that fell in it.

Mr. W. HODGSON (Cheshire County Council) said that the county councils were not using all the powers they already possessed and therefore further legislation should not be demanded.

Dr. A. GREENWOOD contributed a paper on the Desirability for Reports on the Water-supply of each County. He pointed out that it might be necessary in consequence of increased population to supply one district with water from another district, hence the importance of a full knowledge of the available supply in the various districts.

Dr. W. WILLIAMS (medical officer of health of Glamorganshire) communicated a paper on the Rivers of Glamorganshire, with Remarks on the Rivers of Adjacent Counties. He considered that in Glamorganshire greater progress would have been made in the purification of the rivers if the Local Government Board had not insisted under all circumstances on the hard-and-fast rule of land treatment in addition to artificial filtration. It was also important to have as many joint sewerage districts as possible. No crude sewage should be discharged into the sea or into tidal rivers and estuaries unless careful experiments were made with different floating materials to determine the directions of the currents at various conditions of the tide. Health laboratories should be established for the examination of effluents, of refuse, and of materials discharged into rivers, and these should be under the control of the county councils.

The next paper for discussion was by Dr. J. C. THRESH (medical officer of health of Essex) on Water-supply to Isolated Cottages and Small Groups of Cottages. His opinion was that power should be given for the sinking of a well in a central position and the cost should be charged on all owners within a certain radius whose tenants had not a wholesome supply. Every aggregation of houses should have within a reasonable distance an available supply of wholesome water. Public water-supplies, such as springs in roadside ditches, could be, and should be, protected from contamination and utilised.

The last paper was by Miss COCHRANE on Village Water-supplies. The village water-supplies could be placed in the hands of the county councils and the working expenses spread over the whole county or the owners might be made responsible. Miss Cochrane's opinion as regards the schools was that the Education Department should refuse to pay any grants to those schools which were unprovided with wholesome water.

Considerable differences of opinion were manifested as to the form and wording of several motions submitted to the Conference and finally three motions were passed, the first of which recorded that the opinion of the Conference was that the purity of the water-supply could only be effectively secured by placing such supplies in the hands of representative bodies responsible to the consumers. The second motion was to the effect that county councils should have large powers of control over the question of water-supply

in their respective county areas. The third resolution urged county councils to investigate the existing condition of the water-supply within their districts.

On Oct. 17th, under the chairmanship of Mr. W. WHITAKER (Croydon), the meeting discussed the subjects of Water Filtration, Purification, and Sterilisation; Distribution Appliances, such as Filters, Taps, Cisterns, &c.; and Prevention of River Pollution.

A paper on Water Supply and River Pollution was contributed by Professor ROBINSON. He said that something had been done towards preventing the pollution of rivers where special Parliamentary powers had been given to public authorities. A certain amount of elasticity should be observed in regard to the rules concerning the condition of effluents and the application of a rigid standard of purity under totally different circumstances should be avoided. The evidence brought before public authorities and commissioners during the last few years pointed conclusively to the certainty that in the near future the waters which had been considered as unfit to be admitted into storage reservoirs would be so admitted instead of being allowed to run to waste. He regarded the utilisation of bacteria in anaerobic or aerobic chambers as the solution of many existing troubles. The preliminary breaking up of organic matter by anaerobes enabled the resultant liquid to be utilised on the land for agricultural purposes with greater advantage than where the sewage was applied in its crude state, and where sufficient land was not available the further treatment of the liquid in suitable beds would enable any necessary standard of the effluent to be reached.

Mr. A. G. LEIGH followed with a paper on the Control of Weirs and Dams on Streams in Relation to River Pollution. He thought that a staff of river scavengers under the direction of the rivers authority was required. These men, divided into parties with districts assigned to each, ought to commence at the source of a stream and work downwards, removing all unnatural obstructions and abandoned weirs and dams, levelling the bed as far as possible, and flushing and cleansing out the sluices behind the dams, and in this manner traversing its whole course. The sanitary conditions of streams would be improved and what had taken many years to form would be removed in as many weeks. Organic matter would be carried away before decomposition had set in and the stream would have an unimpeded flow and would carry its burdens with it. Streams passing through thickly populated towns should have their beds paved to prevent the collection of dangerous matter.

Two papers were communicated by Mr. H. W. RUSSELL (Berkshire County Council). The first was entitled Prevention of Pollution within the Thames Watershed. His experience of the working of the Thames Conservancy Act of 1894 had led him to the general conclusion that when intrusting an authority with powers to prevent river pollution such authority should undoubtedly have control over the whole watershed, not only over the main river, but also over all its tributaries. Local sanitary authorities might be so constituted that though imbued with the best intentions they might find it almost impossible to bring pressure to bear upon local manufacturers, possibly large ratepayers and possessing great influence with their local representatives. It was also advisable that there should be no distinction between the powers relating to the main stream and its tributaries. What constituted an offence in the one case should apply equally to the other. Small communities when called upon to divert pollution from streams often experienced much difficulty in deciding what measures to adopt to meet the requirements. They were frequently without any information as to the methods of treating sewage, and had not the means at their disposal of obtaining expert advice. The small communities frequently applied to the Thames Conservators for suggestions and advice on the subject, but it was not possible for them to undertake that responsibility. A branch of one of the Government departments should collect information for these small communities. He acknowledged the work done by the London County Council by means of their sludge-boats in entirely altering the state of the river in the lower reaches below the metropolitan drainage outfall. In consequence of this improvement an attempt was now being made which would have been hopeless a few years ago, but now promised a reasonable prospect of success, to re-introduce salmon into the river Thames, and no more practical proof could be given of the beneficent result attending the labours of the last few years.

The second paper by Mr. RUSSELL was on Thames Water-supply and Storage. The conditions of the flow of the water had greatly altered in the course of the latter half of the last century. The same causes which produced floods also produced droughts. All over the Thames watershed drain-pipes had been laid down in millions during the time mentioned and the result was that the rain-water was rushed into the river with great rapidity. The consequence was that the water no longer lay upon the ground for a sufficient time to enable any considerable portion of it to reach the springs, and more or less disastrous floods were caused, because the channel of the river was quite inadequate for the sudden strain. In order to get the water away as quickly as possible pressure of the severest nature was put on the Thames Conservancy. Larger weirs were constantly being made and an enormous mass of water flowed down to the sea every year, the want of which they were quite aware would be felt a few months later. At the present time, after comparatively moderate rainfalls, the rise of the river was much more sudden and acute than formerly. A large amount of water could be taken from the river with advantage instead of being allowed to run to waste. The flow of the Thames was such that no one could doubt the capability of the river to spare the enormous volume of water necessary for the metropolitan water-supply. Judged by the statistics of the average flow at Teddington Weir there was an ample excess, sufficient to provide storage for 80 days' supply for the metropolis without interfering with the amount of water required for the purposes of navigation and for the efficient scouring of the channel of the river. Referring to the quantity of water estimated to be required in 1941 he was of opinion that there was an ample excess at times which could be extracted with advantage to the river. In considering the question from the view of London water-supply it must not be forgotten that the reservoirs in the Lee valley constructed or in course of construction had a capacity of nearly 8,000,000,000 gallons. The present average daily withdrawal of water from the Thames by the water companies amounted to about 10 per cent. of the average flow of the river.

Mr. W. G. BAGNALL (Staffordshire County Council) complained of the want of assistance from the Local Government Board. The question of pollution was the only one which the Staffordshire County Council had serious difficulty about.

Dr. G. REID (Medical Officer of Health of Staffordshire) said all that was considered necessary for the purification of an effluent was that it should be sufficiently pure to sustain fish life, but that did not carry with it the removal of bacteria including disease germs. If local authorities had to remove bacteria from their effluents it was a very serious matter.

Mr. TOMLINSON (Northampton) pointed out that the land system of purification was working satisfactorily and that the Northamptonshire County Council was most anxious that the methods of purification should not be made more difficult and expensive.

Dr. S. RIDEAL said that sewage-disposal works should not be looked to for producing drinking water but should be required to give an effluent satisfactory for the river as a river—that is to say, to bring the stream into a condition suitable for fish life. To remove pathogenic organisms was not the function of sewage-disposal works. Water should be purified just before its use by the consumer by municipalities or by the water companies.

Mr. A. BOWES (Lancashire) said that the standards of purity required were too high for the practical cleansing of sewage. It was found that towns of perhaps 15,000 inhabitants could turn out an effluent which satisfied the standard, but where was the town of 150,000 inhabitants which had ever done that? After all these years of legislation they had streams in Lancashire that were nothing but inky black sewers.

Mr. W. D. GIBBINS (Northampton) referred to the sewage farm work of his town, and Lieutenant-Colonel JONES, V.C. (Aldershot), said that what had to be done was to clear out from the rivers any stagnant filth and not to allow it to remain in the river-bed, because the most perfect effluent could be turned out above such a gathering of filth, with the result that the work of purification would have to be done over again. In dry years the mud should be cleared out from the river-bed.

Dr. J. RYLEY (Yarmouth) was of opinion that for drinking purposes it should not be permitted that sewage containing pathogenic germs should flow into a stream leading to a water-supply. To make water companies remove the pathogenic germs in water was not commencing at the right end.

DR. H. R. KENWOOD (medical officer of health of Stoke Newington and Finchley) submitted a paper entitled A Note with Reference to Water Standards, in which he said that the most an initial analysis of a water could tell was whether the figures of the analysis indicated little or much of organic impurity as judged from certain arbitrary standards. Whether the slight contamination which was practically always discovered was harmful or whether the particular water had recently received slight, but significant and possibly dangerous, pollution, could only be told with certainty by several careful analyses of the same water at short intervals of time and by the careful comparison of the results obtained, or by a comparison between the sample of water and others in the immediate neighbourhood collected from similar sources from the same geological area which were known to be above suspicion. It was a frequent practice, therefore, among those who had to advise as to the wholesomeness of the waters collected for drinking purposes in different districts, to establish local water standards, and a considerable multiplication of these was sometimes necessary even for a small district when the geological formations were much broken up. In his own experience, he had once found it necessary to establish as many as four chlorine standards in one small district. The object of his communication was to draw attention to an interesting and instructive incident which had recently come under his notice and which had destroyed his faith in the value of a chlorine standard in actual practice. The chlorine figure in this instance proved absolutely useless for the purpose of detecting animal pollution. He considered that the chlorine standard figure was useless in the smaller degrees of dangerous pollution and that before giving an opinion as to the safety of drinking a particular water it was of the greatest importance that a careful and open investigation should be made for all possible contaminating influences having regard to the source of the water, and that the circumstances which called for the analysis of a particular sample should always be considered in deciding upon the degree of purity that would justify the acquittal of the water as a possible agency in promoting disease.

DR. A. BOSTOCK HILL (medical officer of health of Warwickshire) agreed that a full analysis ought to be made in the case of water-supplies. He protested against what was being done by so many authorities at the present time in endeavouring to get an analysis of their water-supply done as cheaply as possible.

DR. KENWOOD said that a fair price should be paid for a complete analysis of water as it was a long and difficult matter.

The next paper was by DR. S. RIDEAL on the Purification of Water. He said that the general use of open sand filters for the major portion of the last century had brought about a greater purification in water-supplies than was originally intended, because the primary idea of the open sand filter was simply to remove suspended matter, and it was only within the last 15 years that it had been known that such sand filters in addition improved the bacterial quality. The most important point in judging of the purity of a water-supply at the present time was certainly the typhoid fever death-rate and next to it the general bacterial purity of the water. Turbidity, hardness, and the effect in causing incrustation on boilers were now minor considerations and in a sanitary sense of little value. Sedimentation in storage reservoirs and the different methods of softening, although primarily designed for the removal of suspended solids and mineral matter in solution, also effected a considerable bacterial improvement. Although sedimentation and filtration only indirectly attained bacterial reduction a combination of the two processes could be so arranged as to bring the number of bacteria well below Koch's standard of 100 per cubic centimetre. By using lime as a precipitant in the storage water and a portion of the resulting precipitate as the coagulant to form the artificial *schmutzdecke* in a mechanical filter, a combination of the same effective character was possible. The use of lime as a coagulant in the storage reservoir ensured the absence of plumbo-solvent properties of the water and as the bacterial reduction required was less filtration if resorted to could be augmented and raised. A discussion could be usefully directed towards the question whether purification of public supplies should aim at the whole supply being purified up to the maximum standard of a good drinking water or whether people should be content with a somewhat less purified water for the general supply and sterilise separately in each house such portion as would be required for food purposes. It is probable that a gallon per head per day of sterilised water would be sufficient for drinking and culinary use, so that only from 2 to 5 per cent. of the total supply would need to be hygienically perfect. The methods for ensuring the absence of pathogenic organisms in the small quantity of water required for drinking purposes could be divided into heat sterilisation, candle filtration, and chemical treatment. He believed that the problem of economical and efficient heat sterilisation was worth the further consideration of water engineers. The Pasteur-Chamberland candle type filter seemed to be the only one destined to survive, and chemical sterilisation could only be regarded as an emergency method. Dr. L. C. Parkes, the author, had quite recently advocated the use of bisulphate of soda as an anti-typhoid, especially for waters containing a large amount of organic matter, and he was glad to hear that that salt was being tried for that purpose on a considerable scale in South Africa. Most investigators, however, favoured the employment of oxidising agents in some form for sterilising waters. Ozone was so easily obtained that in several directions it had been tried even for purifying public supplies on a large scale, and it might in the near future be used extensively as a "finisher" in the purification of water.

MR. T. CAINK (City Engineer, Worcester) gave the details concerning the drop in the typhoid fever rate at Worcester directly the water-supply had been improved in the year 1894.

MR. WATSON (Bradford) said that the Bradford Corporation had adopted the method of lime precipitation many years ago.

MR. W. J. BURGESS (Liverpool) said that they had a bacteriological examination of the water every day in Liverpool.

DR. BOSTOCK HILL protested against judging of the purity of a water-supply entirely by the typhoid fever death-rate. If they were to do so in many instances they would be doing injustice to a water-supply. In two epidemics of typhoid fever he had found that the water-supply was not in any way at fault.

DR. S. RIDEAL said that the municipalities should purify the water just before it reached the consumer.

MR. F. VERNEY (London County Council) read a paper on the Value of Soft Water, and in the discussion which followed MR. MATTHEWS (Southampton) and MR. CLAYTON BEADLE joined.

The proceedings terminated with a vote of thanks to the Chairman, proposed by Sir F. S. POWELL, M.P.

LONDON SCHOOL OF TROPICAL MEDICINE.

AN influential meeting was called together by the Seamen's Hospital Society on the occasion of the opening of the third winter session of the London School of Tropical Medicine to hear Lord Brassey deliver the opening address at the Royal United Service Institution, London, on Oct. 16th.

Lord BRASSEY explained that the meeting was for the purpose of obtaining further funds to enable the Seamen's Hospital Society to carry on its work in the treatment of tropical disease. The Colonial Office and Foreign Office in 1899 had contributed £3500 to the school and the India Office had subscribed £1000. The judgment, therefore, of those Government departments was in the highest degree favourable. The school was originally intended for the instruction of surgeons in the colonial and Indian services, but private students, missionaries, medical men, and others had been admitted. Experience had shown that the demand for instruction in tropical medicine was much greater than had been originally anticipated. During the last session it had been found necessary to refuse several students, and some four or five had been compelled to postpone their attendance until the next session. To carry on the work efficiently further funds were required to enlarge the school and to place it on a sound financial basis. The importance of the health of Europeans in the tropics could not be over-estimated, especially to a country like ours that depended for colonial prosperity upon the efficiency of our fellow-countrymen in tropical countries. A healthy community gave continuity of

administration to the Government, diminished sick leave through improved conditions of health, and conduced enormously to efficiency of administration. In commercial operations it was all important that those who conducted them should not be too often away on account of sickness. Sir Francis Lovell was about to proceed to the tropics on behalf of the Seamen's Hospital Society to make known the advantages of the London School of Tropical Medicine, and to endeavour to raise funds on its behalf. The school needed a sum of £100,000, but large as that sum was it was yet a small one for the great British Empire with so great a stake in the tropics.

Dr. PATRICK MANSON said the object of the school was to educate medical men who proposed to practise in the tropics. Another function was to attempt to advance the science of medicine in regard to tropical diseases. Mainly through the assistance of Mr. Chamberlain and of the managers of the Dreadnought Hospital the initial financial difficulties and professional opposition had been overcome. The number of students was so numerous that they could not admit them because the accommodation was too scanty. A growing institution should not be choked by a superfluity of work thrown upon it. There was a danger that students coming to them and finding no room might go elsewhere or give up the idea of special education in tropical diseases. The students were no callow youths—they were men of experience, many of them with grey hairs. The space at their disposal did not suffice to accommodate the students. They wanted enlarged laboratories, a lecture-room, a museum, and a library. Funds were appealed for on the strength of the work that was done by students of the school. One of them, Dr. George Low, discovered in the West Indies that over 11 per cent. of the inhabitants of Barbadoes were the subjects of the peculiar blood parasite causing elephantiasis, and had shown that by simple and inexpensive sanitary measures that disease and its associated condition were capable of absolute eradication in the course of a generation. Dr. H. E. Durham who was going out on behalf of the school to study disease in the South Pacific was the same gentleman who went out to Brazil with Dr. W. Myers to study yellow fever. Both contracted yellow fever and Dr. Myers died. When men like these were ready to lose their lives in the cause of science and humanity there should be no difficulty in finding funds for these researches. The English Government were very niggardly in these matters when compared with the German Government. Professor Koch had written giving particulars of subsidies granted to the following German medical expeditions by the German Government: (1) Professor Frosch in Brioni (Istria), (2) Staff-Doctor Bludau in Lussinpiccolo (Istria), (3) Staff-Doctor Vagedes in German South-West Africa, (4) Staff-Doctor Dempwolff in New Guinea, (5) Staff-Doctor Ollwig in German East Africa, (6) Dr. Krulle in the Marshall Islands, and further expeditions to Togo and Kameruns were being planned. Members of European expeditions received a daily allowance of £1 besides travelling expenses and allowances, and those on foreign expeditions £2 daily with allowances and special grants for personal equipment.

Sir FRANCIS LOVELL, C.M.G., late Surgeon-General of Trinidad, said that he had undertaken an expedition to the tropics on behalf of the Seamen's Hospital Society in order to provide funds to enable that society to put the London School of Tropical Medicine in a more satisfactory financial position. It was absolutely necessary that funds should be forthcoming, and it was felt by the Seamen's Hospital Society that an appeal should be made to those resident abroad. He had offered to the society to go abroad to induce the English residents in the East and in other tropical parts to contribute towards the objects which the school had in view. It had been decided that he was to go to India, to Ceylon, to the Straits Settlements, to China, to Japan, to New Zealand, and to Australia. He would return home probably by way of the United States and Canada. His intention was to raise funds to enable the society to put the London School of Tropical Medicine on such a footing as would make it worthy of its name as a teaching body in the great city of London.

SEWERAGE AGREEMENTS.—At the Plymouth County Court on Oct. 16th the St. Germans Rural District Council recovered £5 from a builder for connecting two houses with the public sewer. The case involved the validity of agreements under which the council exact from builders a contribution towards the cost of sewer extension.

THE ANNUAL REPORT OF THE CHIEF INSPECTOR OF FACTORIES AND WORKSHOPS FOR THE YEAR 1900.

III.

CONCLUDING NOTICE.[1]

IN the second notice of this report a considerable space was occupied in giving an account of lead-poisoning as it occurs in the various industries in which the metal is used, and the means which the inspectors have adopted to lessen the evil. The other poisonous metals have caused fewer cases of poisoning, and, important as they are, it is fortunately not necessary to dwell upon them in any great detail.

The number of cases of mercurial poisoning contracted in factories and workshops during the year was nine. With a single exception all the sufferers were men. The one woman affected was a "manufacturer of jellies"; the exact occupation in which she was engaged was that of "quicksilvering trays," a process carried on once or twice during the year, and it need only be added that the case was a slight one. Of the men three were manufacturing chemists, one was employed in alkali works in a process for the recovery of mercury, one was a thermometer-maker, one was a maker of electrical metres, and one was a glass-silverer. It was found by the inspectors that in factories in which calomel, corrosive sublimate, and red oxide of mercury and vermilion are made a proportion of no less than 15 per cent. suffered from salivation and over a third from tremors. The number of men examined was, however, small—27 in all. The chief danger of poisoning occurs in the volatilisation of the metal which occurs in the process of sublimation. Special rules have been drawn up for the use of the workers in trades in which mercurial preparations are made, and these rules have, in the case of two factories, been voluntarily adopted. The rules include the appointment of an examining surgeon, the provision by the manufacturers of overall suits, respirators, washing facilities, including baths with hot and cold water constantly laid on, and the use of a cloak-room. The workers are forbidden to take food or tobacco to the factory. It has been found that the makers of electric metres suffer to a considerable extent from mercurialism, and in one case, in which an increase of business necessitated the building of a new factory, the firm were glad to avail themselves of the valuable information which was afforded to them by the medical inspector both in regard to the improvement of the structure of the factory and the conditions under which the business would, from a hygienic point of view, be best carried on. It is in this quiet way that much of the most useful work done by the medical officers of the Home Office is carried out, without litigation and without publicity. And thus it often happens that the best work is often that least appreciated.

During the year an investigation was made into the condition of those who worked at the process in use by hatters for the preparation of the fur—a process in which nitrate of mercury is used. A circular letter on this matter was sent in January of the present year to the manufacturers engaged in the business by the chief inspector (Appendix 15). In this letter Dr. B. A. Whitelegge pointed out that the precautions of primary importance which should be adopted for the protection of the workers are: (1) the removal of the fumes and dust; (2) periodical medical inspection by an officer having power to suspend the workers from their occupation; and (3) facilities for washing.

Seven cases of arsenical poisoning, all of which occurred in women, were reported from a factory in which "emerald green" is manufactured, and at which 25 women were working. This salt is used chiefly for the destruction of the insect pests which destroy fruit trees and potatoes; the business, therefore, is a fluctuating one. The special incidence of the poisoning in the case referred to was, in the opinion of the medical inspector, due to the defective working of the fan which should have removed the dust produced in the process of packing. 13 cases, of which three were fatal, were reported of poisoning from arseniuretted hydrogen. One of these cases is recorded in considerable

[1] The first and second notices appeared in THE LANCET of Sept. 28th (p. 868) and Oct. 12th (p. 998), 1901, respectively.

detail (pp. 459–462). A cautious Scottish jury found that the cause of death was "from poisoning contracted (by the deceased) in the course of his employment." The opinions of scientific experts differed, and apparently still differ, as to the nature of the fatal gas and the means by which it was generated in this case.

The total number of cases of anthrax reported during the year was 37, of which seven were fatal. Of these cases 12 (of which three were fatal) occurred in people engaged in the handling of horsehair, and of the sufferers five were men, two were women, and five were "young persons" (three males and two females). Nine cases (of which two were fatal) occurred amongst wool-sorters and nine (one of which was fatal) amongst tanners and fellmongers, part of whose business it is to handle and sort hides and skins. The remaining seven cases occurred amongst those engaged in other industries. No case occurred amongst wool-combers. For the regulation of this industry special rules (given in the Annual Report for 1899, pp. 57 and 58) came into force in April, 1900. The rules appear to be working well—a fact which the medical inspector ascribes in great measure to the fact that they were the outcome of a conference held between representatives of the Bradford Chamber of Commerce, the Factory Department of the Home Office, and the Bradford and District Trades and Labour Council. Mr. Cecil Duncan, analyst to the County Council of Worcester, in conjunction with, and by means of apparatus provided by, a firm of hair and carpet manufacturers at Worcester, has carried out a number of experiments to test the efficacy of a well-known steam disinfector in regard to its use in sterilising infected China mane hair. The experiments appear to have been conducted with the greatest possible care. The conclusions to which Mr. Duncan has come throw great doubt on the accuracy of deductions drawn from the experiments of Dr. Kubler,[1] whose report to the German Health Office has apparently been estimated at a higher value than its intrinsic worth warranted. Dr. Kubler's experiments were made with laboratory specimens which he introduced into bales of hair. Mr. A. Webb has made experiments in which the material used contained the spores of anthrax in their natural environment on the hair, dry and surrounded with dirt and grease. What he actually found was that so long as the steam was kept away from the spores a high temperature alone was not effective in killing them. Unfortunately, steam is very prejudicial to hair from a commercial point of view. It seems possible that no effective method has yet been discovered of thoroughly freeing hair from the spores of anthrax without injury to the material which contains them. The best method of efficient disinfection of merchandisable commodities from such a dangerous poison as that of anthrax is not an unfit subject for inquiry by the medical officers of the Local Government Board.

Attention was lately prominently called by Dr. Birmingham to the great mortality which occurred amongst those engaged in the "ganister" industry. Ganister is a close-grained hard silicious stone and contains from 75 to 95 per cent. of silica. It has a greater fire-resisting capacity than any other known substance and is therefore used for lining the bottom of crucibles and of Bessemer converters. The stone is obtained by blasting with dynamite; it is afterwards crushed by an instrument specially devised for the purpose and is finally ground in the presence of water and moulded into bricks. The miners suffer greatly from the inhalation of the dust and frequently die from a disease which has for years been known as fibroid phthisis and to which in the case of stone miners the term "silicosis" has more recently been applied. Dr. Birmingham in the paper which he read at the Sanitary Institute in the year 1899 stated that the annual average death-rate which occurred amongst ganister workers amounted to 22·29 per 1000 workers.[2] Commander Smith on behalf of the Home Office has made an inquiry into the working of the ganister industry and Dr. F. W. Andrewes has investigated the pathological conditions which exist in the lungs of a typical case of silicosis, and a chemical analysis conducted by Mr. H. A. Schölberg shows that a large quantity of silica was contained in the substance of the lung. The report contains some good coloured illustrations of the pathological appearances. Mr. J. Hilditch, inspector for North Wales, who gives an excellent account of the manufacture of silica and fireclay goods, and who writes with the knowledge which is to be obtained only by long experience, has drawn up some suggestions which are likely to be of use if they are efficiently carried out. They are all designed to prevent the inhalation of the noxious dust, and it is not necessary to do more than refer to them in terms of praise.

The sectional report of Mr. W. Williams, the inspector under the Cloth Factories Acts, deals not only with the administration of the control of the working of cotton mills, but includes also the administration of special rules for flax and linen factories which are engaged in damp ("humified") processes of work. During the year 1900 the number of rooms from which humidity returns were received amounted to 1476; of these, 1217 were in England, 16 in Scotland, and 243 in Ireland. Of the English counties Lancashire is the great centre of the cotton industry, and 902 returns were received from that county alone. Of this number one only was from a worsted mill and five were from flax mills. In the West Riding of Yorkshire of 166 returns 71 were from cotton mills and 91 were from wool and worsted mills. The flax-spinning industry is carried on chiefly in Ireland. Of 170 rooms used for this trade 10 only exist in England, nine in Scotland, the remaining 151 are all in Ireland, and of these no less than 101 are in the county of Antrim. The chief work of Mr. Williams has been that of enforcing the regulations issued by the Secretary of State under the Cotton Cloth Factories Act, 1897. Of this work the supervision of the ventilation of weaving-sheds has been the most important, and this for more than one reason. In the first place, the intrinsic importance of the subject demanded that it should have prime consideration, but this reason alone would not have sufficed had the regulations been ambiguous in their phraseology. But the regulations "for the first time in the history of factory legislation arrived at a scientific standard of ventilation based on the actual purity of the atmosphere breathed by the workers." The impurity of the air was to be judged by the proportion of carbonic acid present in the air of the shed. The regulation, it may be remembered, was made after an inquiry by a committee which included Sir Henry Roscoe, Dr. Ransome, and the late Sir William Roberts. It was as follows: "The arrangement for ventilation shall be such that during working hours in no part of the cotton cloth factory shall the proportion of carbonic acid (carbon dioxide) in the air be greater than nine volumes of carbonic acid to every 10,000 volumes of air." The committee pointed out that the standard amount of carbonic acid permitted by this regulation was a high one, but that they anticipated that the adoption of the regulation would, notwithstanding that objection, be of service. So it has proved. The greatest good which is likely to follow is the precedent which has been formed for the adoption of a definite and easily determinable standard of permissible impurity in the air breathed by workmen. To show the amount of improvement which has already been effected the inspector gives a table based upon tests made in 35 weaving-sheds during the year 1900. The table shows in each of the 35 cases the number of volumes of carbonic acid per 10,000 volumes of air: (1) before the improvement in ventilating arrangements was effected; and (2) after improvement in ventilating arrangements was effected. The actual improvement effected is, however, most easily realised by comparing two other columns of figures which have been added to the table (see C and D in the tabular statement given below). The figures in these columns are obtained by deducting from the amount of carbonic acid experimentally found to be present in the workrooms the amount normally present in the outside air of manufacturing towns—an amount which is approximately estimated as four volumes per 10,000. The figures in these last two columns therefore give a tolerably accurate indication of the respiratory impurity present in the air before and after improvement was made in the ventilating arrangements. The average of the 35 cases is as follows and the improvement will be most easily seen in a tabular form:—

Number of volumes of carbonic acid (CO_2) per 10,000 volumes of air.		Approximate number of volumes of CO_2 per 10,000 due to respiration.	
		C.	D.
Before improvement in ventilating arrangements.	After improvement in ventilating arrangements.	Before improvement in ventilating arrangements.	After improvement in ventilating arrangements.
13·0	7·9	9·0	3·9

These results, which affect more than 6000 workers, show

[1] Arbeiten aus dem Kaiserlichen Gesundheitsamte, vol. xv., Heft 1.
[2] Journal of the Sanitary Institute, vol. xxi., part 1.

that an enormous amount of good has been effected, and in some cases it may be mentioned that the amount of respiratory impurity has been diminished by more than two-thirds. The inspector mentions one case in which a firm of cotton manufacturers have introduced a system of ventilation by which the amount of carbonic acid present in their sheds has been reduced to the extent of from 5·6 to 6·7 volumes per 10,000 volumes of air. Such an instance is unfortunately not a common one, although opposition to sanitary improvements is becoming less marked on the part of manufacturers as they are learning that improved health conditions amongst the workers leads to better work. In the past the atmospheric pollution present in the workshops has been appalling and has been quite sufficient to account for the low standard of physique which has been commonly remarked as usual amongst cotton-spinners. Unfortunately, the regulation which we have quoted in regard to the permissible amount of carbonic acid impurity refers only to the air of the artificially moistened sheds in which the weaving of cotton cloth is carried out. No such regulation is in force in the case of rooms used for cotton-spinning. The atmospheric condition of many of these rooms must be a fertile source of disease. A table given showing the amount of carbonic acid in some of these mills is most striking. We must be content to quote a few cases only.

No. of case.	Process.	Space per head in cubic feet.	Temperature in degrees Fahrenheit.	Number of volumes of CO_2 per 10,000 volumes of air.	Remarks.
2	Spinning.	9,000	85	24·2	No mechanical means of ventilation.
3	,,	8,500	66	33·5	
7	,,	10,000	92	28·1	
8	,,	10,000	85	32·2	
9	Carding.	4,000	80	10·2	

The cotton mills in which these investigations were carried out are situated at Bolton and "from a structural point of view" are said to be not bad specimens of their class. Mr. Williams remarks that he thinks that most intelligent observers will be convinced that there is a great waste of human life and energy owing to the defective supply of fresh air to indoor workers. At the present time very many of the cotton-spinners' sheds have no mechanical means of ventilation. The temperature of the air in some of the sheds is much higher than it should be. In the table above quoted it will be noticed that in one case (No. 7) the temperature was found to be 92° F. In another case, which is omitted from the list which we have taken, the temperature was also 92° F. and in a third case it was 91° F. The regulations of the Secretary of State stipulate that the steam used for moistening the atmosphere of workmen's sheds must be obtained from pure water—a regulation rendered necessary by the knowledge that it had previously been occasionally the practice to obtain the steam from water which was polluted by the remains of decaying animals or by sewage. Flax mills and linen factories have been placed under special rules in regard to their management since the year 1896. These regulations have regard to the control of weaving-sheds, wet spinning-rooms, roughing-rooms, sorting-rooms and hand hackling-rooms, carding-rooms, and dressing-rooms. The rules, which are given *in extenso* in the report (pp. 422–423), have been of great use, but the inspector finds that conditions still exist which are dangerous to health. In the wet spinning-rooms the workers, especially the children, have their clothes wet through by the spray. The atmosphere, which has frequently a temperature of over 70° F., often contains more moisture than the amount legally allowed in the case of cotton mills. The compulsory special rules are not at present applied to wet spinning-rooms and in some cases the steam is generated from very impure water. Mr. Williams in concluding his report advises that a special inquiry should be made into the sanitary condition of flax and linen factories, with especial reference to the following subjects: (1) the protection of workers from dust; (2) the ventilation of all departments, particularly the reeling-rooms, wet spinning-rooms, and weaving-sheds; (3) the prevention of excessive humidity and temperature in wet spinning and weaving; (4) the protection of workers in the wet spinning-rooms from getting wetted by the spray from the frames; (5) the prohibition of the use of impure steam or impure water for moistening the air breathed by the workers; and (6) the reduction of the temperature of dressing-rooms. The chief inspector, we are glad to see, announces that arrangements are being made for such an inquiry.

The report of the engineering adviser, Mr. E. H. Osborn, is concise and is clearly written. Mr. Osborn gives considerable prominence to the regulations in force in some of the United States of America. The rules are, as he remarks, "notable for perspicuity of specific detail and comprehensiveness." It is, however, much easier to begin in a new country with new rules. There are fewer organised trade interests to fight. The difficulties which have arisen in England have often been caused by a seeming injustice in interfering with long-established customs of trade. Yet it will be admitted by all right-minded people that "it hardly seems consonant with sound policy that an employer should claim a sort of vested interest in subjecting his workmen to unhealthy conditions because his machines are badly arranged." Mr. Osborn suggests that injurious dusts should be scheduled and that the list should be added to as research makes clear the mischievous nature of those not already in the list. This proposition seems from every point of view to be commendable.

Mr. A. G. H. Thatcher, His Majesty's Inspector's Assistant, gives a most valuable report on accidents occurring on buildings in course of construction or repair (Appendix 10, p. 97). He explains the causes of the occurrence of those accidents which may be considered "controllable"—that is to say, avoidable by builders and workmen. He deals briefly with the mishaps for which the architect is responsible—accidents which, he points out, are "generally owing to erratic or miscalculated formulæ." The report is quite short and consists of three pages only, with an appendix of one page of illustrative drawings. It contains an enormous amount of condensed information in regard to scaffolding and the lifting and carrying of ironwork, timber, bricks, slates, and stone. The illustrations are excellent. The one on scaffolding shows at a glance the true theory of scaffold-building and gives the technical names of the various parts and processes adopted. A copy of this report should be in the hands of all builders.

It may be of use to mention the appeal cases which were of interest to the Home Office and which were decided during 1900. They were as follows: Squire *v.* Sweeny (High Court of Justice in Ireland, Queen's Bench Division), Jan. 16th, 1900; Squire *v.* Sweeny (High Court of Justice in Ireland, Queen's Bench Division, Crown side), June 27th, 1900. In the first of these cases it was decided that the Act 41 Vict. c. 16, s. 68 (4) does not confine the place at which inquiries and examinations under it are made to the place where work is given out to out-workers or to the factory or workshop itself. Tracey *v.* Pretty and Sons (1901, 1 Q. B. 444), Hoare *v.* Ritchie and Son (1901, 1 Q. B. 434). In this case it was held that it was not necessary in order that a conviction should be obtained under Section 36 of the Factory and Workshop Act, 1878, to prove that any worker had sustained actual injury from inhaling dust, but that it was sufficient if it was proved that dust was generated and inhaled by the workers to an extent that must in the long run be injurious. Bennet *v.* Harding, High Court of Justice (Queen's Bench Division), June 14th, 1900. In this case it was held that stables and stable-yards were a workplace within the meaning of Section 38 of the Public Health London Act, 1891, and that as cab-drivers were in attendance there sanitary conveniences must be provided for them.

Commander H. P. Smith in his report on the manufacture of wall-papers (Appendix 9, p. 83) gives a most interesting account of the business. The report, he points out, is to be considered as supplementary to that of the Departmental Committee on Dangerous Trades.

During the year some correspondence took place between the Home Office and the Irish Agricultural Society on the subject of the management of creameries in Ireland (Appendix 11). This industry is a very important one, and it is to be hoped that it will not be unreasonably hampered by restrictions. The attitude of the Irish Agricultural Society cannot be clearly ascertained from the correspondence published, for a circular which forms part of their case does not appear in the report.

The number of accidents reported by certifying surgeons as due to locomotives registered from July 1st to Dec. 31st,

1900, amounted to 178 (Appendix 19). Many of the accidents were caused in the process of shunting. No fewer than 238 injuries were reported during the same period as having been caused by grindstones (Appendix 22).

The report of Miss A. M. Anderson, His Majesty's Principal Lady Inspector of Factories, which has already been incidentally referred to, compares in one important point very favourably with that of the chief inspector. It is provided with a well-arranged table of contents, so that it is possible without loss of time to refer to any point which may be of interest to the reader.

THE FIFTH INTERNATIONAL CONGRESS OF PHYSIOLOGISTS.

HELD AT TURIN, SEPT. 17TH–21ST, 1901.

THE following are some further abstracts of communications made to the above Congress:—

Gustatory Sensations in the Larynx.

Dr. F. KIESOW (Turin) read a paper on the above subject. He said that Michelson and Langendorff had found that the posterior surface of the epiglottis (in whose mucous membrane taste-buds were found) gave a positive reaction of taste to solutions of quinine and saccharin and to the electric current. Dr. Kiesow was able to confirm this and in addition found that all the four recognised modifications of gustatory sensation—acid, saline, sweet, and bitter—were also present. The intensity of the sensation was much less than in other taste regions and some of the "tastes" were confused. He himself could not distinguish between acid and saline with certainty. The inner surface of the larynx was also found to be sensitive in one experiment upon himself, but neither acids nor the electric current were tested. To carry out this latter experiment it was necessary to paint the epiglottis with solutions of cocaine and gymnemic acid. A sound was then passed (aided by the laryngoscope) to apply the solutions. In the investigation Dr. Kiesow was assisted by Dr. Hahn.

Stomach Movements in Different Animals.

Professor GRÜTZNER (Tübingen) said that these were studied by feeding animals (mostly rabbits) on the same diets and killing them at different periods after administering the food. The chopped-up meal was coloured with a substance prepared from the fruit of the bilberry (vaccinium myrtillus), which was bluish-green in alkaline fluids, but turned red when acidified. The stomachs were quickly removed from the animals, after being ligatured at both ends and rapidly frozen through. Transverse and longitudinal sections of the organ were then made. After digestion had fairly set in the pyloric funnel was always found filled with acidified and well-digested food. At the cardiac end the food was acid only at the surface, never in the interior of the mass. Fluid food, however, when brought into the stomach after a long period of fasting rapidly came into contact with the mucous membrane, was acidified, and then passed on to the pylorus. Solid or semi-solid food, on the other hand, was conducted into the interior of any food already in the organ—and rabbits' stomachs were rarely empty—only slowly reaching the mucous membrane to be acidified and digested. What happened generally, appeared to be as just related in the foregoing sentence, the food after gaining the surface of the mucous membrane being driven along both curvatures from cardia to pylorus and only when digested allowed to enter the pyloric funnel. Localised contractions were observed which might have served this purpose or possibly might have been the cause of the so-called rolling movements which were supposed to account for the formation of "balls" in the stomach.

The Excretion of Bile on Various Diets and after the Subcutaneous Injection of Certain Food Materials in Solution.

Dr. BARBERA (Bologna) contributed a paper on the above subject. The experiments were performed on dogs with complete permanent biliary fistulæ. It was found in agreement with others that proteids caused a marked increase in the elimination of bile, extending over a considerable period; an equal quantity of fats produced a less increase but of longer duration. Carbohydrate food, however, caused exceedingly little augmentation and only for a very short time. Mixed diets produced effects which varied but which harmonised with the proportion of one or other of the foregoing ingredients in the mixture. Water produced no influence. The period of latent effect was shortest (from 20 to 30 minutes) after meals of proteids, carbohydrates, and of mixed ingredients, and longest (from 50 to 60 minutes) after fats. The maximum rate of outflow was reached from two to three hours after carbohydrates, from three to four hours after proteids, and from five to seven hours after fats. Subcutaneous injections of 10 per cent. solutions of glucose increased the elimination slightly, but the effect soon passed off. Similar solutions of somatose had a greater and more lasting effect. Oil injected under the skin had no influence.

The Action of Succus Entericus on Pancreatic Juice.

Dr. A. WALTHER (St. Petersburg) said that it was known that a ferment had been discovered in the succus entericus by Pawlow and one of his pupils, which had the effect of markedly augmenting the proteid-digesting power of pancreatic juice. A demonstration of the influence of this ferment (named enterokinase) upon the digestion of fibrin was made by Dr. Walther whose further investigations went to show that it only increased the power of fresh pancreatic juice which contained a considerable proportion of its ferment in the form of zymogen. The enterokinase rapidly converted the zymogen into trypsin. In this process oxidation played no part and hence the zymogen of the juice must be different from Heidenhain's zymogen obtained from the gland. A proteid body could be precipitated from fresh pancreatic juice in considerable quantity with dilute hydrochloric acid (0·5 per cent.), which was neither trypsin nor its zymogen. These remained in the filtrate, the whole of the zymogen of which could readily be converted into trypsin by submitting it to dialysis. This was shown by the fact that its activity was thereby greatly increased and could be no further augmented by the addition of kinase. The action of the kinase was probably therefore one of hydrolysis. Fresh pancreatic juice had also its digestive power increased by dialysis. During dialysis of the filtrate from the HCl-precipitate, a proteid body, possibly of a globulin nature, often separated out. This body very strongly digested proteids, but had little or no influence on starch. The fluid out of which it separated digested starch with great ease, however, and also to some extent proteid. This fact was of interest since it showed that in dialysis a means was at hand for separating the tryptic from the amylolytic ferment.

Does the Spleen Play a Rôle in Pancreatic Digestion?

Professor DELEZENNE and Dr. A. FROUIN, in a paper under the above heading, stated that the old theory of Schiff, that a substance indispensable for the pancreatic digestion of proteids was formed in the spleen, though denied by many, and displaced by Heidenhain's discovery of a tryptic zymogen, had recently been revived by Herzen and Gachet and Pachon. The latter observer believed that the splenic substance or ferment played the rôle of converting the zymogen into zymase (trypsin), thus setting it free to work. Dastre, however, had shown that removal of the spleen in no way altered the health of the animal or prevented the full development of young animals. Professor Delezenne and Dr. Frouin thought this experiment hardly sufficient to settle the theory one way or the other. Accordingly they attempted the solution of the question as follows. The stomach was isolated in dogs by joining the lower end of the œsophagus with the upper end of the duodenum. It was possible to accomplish this without injury to the vagi nerves. Both ends of the stomach were then closed and a fistula made into it through the wall of the abdomen, by means of which gastric juice was drawn off once a day. In other cases the stomach was wholly excised. The animals recovered well from these operations and their feeding presented no special difficulty. After recovery the spleen was excised and again without permanent interference with health. In such animals digestion of proteids was wholly performed by the pancreas and yet removal of the spleen produced no trouble whatever. The dogs not only lived but enjoyed the best of health, and one of those with an isolated stomach was exhibited at the congress six months after the second operation. Further, the juice secreted by the stomach was perfectly normal. Professor Delezenne and Dr. Frouin therefore concluded that the spleen could play no indispensable rôle in pancreatic digestion. Its influence on this process was quite insignificant when contrasted with that of Pawlow's entero-kinase.

The Origin of the Pepsin found in Urine.

Professor DELEZENNE and Dr. A. FROUIN had also made use of the animals employed in the foregoing research to determine the source of the peptic ferment which was normally found in urine. The zymase was present most abundantly in the morning urine and that secreted between meals. During the height of digestion it was absent. These facts suggested the idea that the ferment of the urine was the same which had been employed in digestion and which was afterwards absorbed to be got rid of by the kidney. In support of this it was found that the urine of dogs from which the stomachs had been removed never yielded any pepsin; that of the animals in which the organ was merely isolated, on the contrary, always contained it. It was permissible, therefore, to conclude that the urinary pepsin had its origin in the stomach and was also absorbed from the same organ. It seemed of interest to determine whether absorption likewise occurred from the bowel. Normal gastric juice was therefore given to an animal without a stomach, but no ferment was ever found in the urine, consequently Professor Delezenne and Dr. Frouin supposed that this did not take place in health. It was more probable that the ferment was destroyed in the intestine.

The Absorption of Sugars from the Intestine in Relation to the Osmotic Tension of their Solutions.

Professor ALBERTONI (Bologna) said that he had found that the rate of absorption of sugars did not correspond with the osmotic tension of the substances in solutions. Of solutions of glucose, saccharose, and lactose of the same osmotic tension the amount absorbed of the two former was greater than that of the latter. The same difference was maintained even when the osmotic tension of the lactose solutions was altered—i.e., made higher or lower than that of the others. The absolute quantity of substance absorbed was, however, always greater with hypertonic than with isotonic or hypotonic solutions. When hypertonic solutions of the sugars had been administered by the stomach the osmotic tension of the liquid found in its cavity an hour later was always reduced, though greater than that of the blood. On the contrary, with isotonic and hypotonic solutions an increase of osmotic tension occurred. In this connexion it was of interest to remark that the osmotic tension of the liquid normally found in the intestine was practically constant and always higher than that of the blood. During absorption the osmotic tension of the blood underwent slight variations, being augmented somewhat when hypertonic solutions were brought into the intestine. Professor Albertoni concluded that while the laws of osmosis certainly played a part in the process of absorption, especially from the stomach, they did not suffice to explain the whole matter. Experiments which he hoped to publish shortly went to show that the colloidal properties of the blood played a more important rôle.

The Absorption of Mono- and Di-saccharides from the Intestine.

Dr. NANGANO KIOTO contributed a paper on the above subject which was communicated by Professor F. ROHMANN (Breslau). The experiments had been performed on dogs with Vella's intestinal fistula. Similar quantities of solutions of the same strength of hexoses (glucose, galactose, mannose, and fructose), and of pentoses (arabinose and xylose) were injected into the bowel and the quantity of each which had disappeared in one hour determined. It was found that unlike quantities of the different stereoisomeric sugars were absorbed, from which it must be concluded that the process was not wholly dependent upon osmotic pressure but that other properties of the substances (in the foregoing cases probably configuration of the molecule) came in. The absorption of di-saccharides was also investigated. These, as was known, were for the most part cleft into mono-saccharides before being taken up; but a greater or less quantity in Dr. Kioto's experiments must have been absorbed unchanged, the activity of the intestinal ferment having been insufficient to have effected their cleavage within the time. It was therefore concluded that the process was continued on their way through the mucous membrane, extracts of which yielded solutions capable of transforming the sugars in question.

Looking Back.

FROM

THE LANCET, *SUNDAY, OCTOBER* 26, 1823.

Ventilation.

THE following, taken from the History of the Dublin Lying-in Hospital, shows in an extraordinary degree the advantages that result from free ventilation. We consider this a document of great value, and hope that it will convince all parents of the folly, not to say cruelty, of confining young infants in rooms with closed doors and windows.

Dublin Lying-in Hospital.—In this hospital 2,944 infants out of 7,650 died in the years 1782, 1783, 1784, and 1785, within the first fortnight after their birth, that is nearly *one child* out of every *six*. They almost all died in convulsions, of what the nurses called *nine-days fits*, because they came on within nine days after their birth. These children, many of them, foamed at their mouths, their thumbs were drawn into the palms of their hands, the jaws were locked, the face was swelled and looked *blue*, as *though they were choaked*.

This last circumstance led the physicians to conclude that the rooms in the hospital were too *close* and *crowded*, and hence that the infants had not a sufficient quantity of *good air* to breathe. They contrived, therefore, *air-pipes*, six inches wide, which were placed in the ceiling of each room. Three holes, an inch wide, were bored through each window frame; and a number of holes were made in the doors at the bottom.

Thus the rooms were kept *sweet* and *fresh*; and the *consequence* has been, from the register in that hospital, that,

	Children.	
In 1786, out of	1,372	there died 51
1787, ——	1,375	—— 59
1788, ——	1,496	—— 55
	4,243	165

So that since the alteration of the rooms as to airiness, out of 4,243 there died 165 children; whereas before, the average amount of deaths from the same number was 1,632.*

* If out of 4,243 children there perish, *when the hospital was ventilated*, only 151 infants, how many may be expected to die out of 7,650, the number of children born in the DUBLIN *Lying-in Hospital* in the years 1782, 1783, 1784, and 1785? The answer is, by the rule of proportion, 279. But, how dreadful the account, there perished absolutely 4,243, deducting 279, solely *from the want of a due supply of air!* We have not only to deplore the number of innocent victims who were destroyed at this time and previous to it, but also to lament the wretched anguish of the disconsolate parents, and the impoverished state of health in many of the poor babes who survived this slaughter.

The great and good Dr. Hales, whose studies and experiments were constantly directed to the benefit of mankind, recommended a trial of *ventilators* in the SAVOY and NEWGATE prisons, in both of which the *jail fever* was frequent, and commonly fatal: the good effects exceeded even his most sanguine expectations; for a very small proportion of the sick died, when the ventilators came into use, and the contagion seemed in a manner arrested. The benevolent Mr. HOWARD found the prisons on the continent perfectly free from *this pestilential fever*; owing, as he thinks to the apartments in which the prisoners, were confined being spacious, and consequently well aired.

EPSOM COLLEGE.

WE have frequently called attention to the good work carried out by the Royal Medical Benevolent College in the hope of enlisting for that excellent institution generous support from members of the profession. We now have pleasure in referring to the uninterrupted progress which has attended the educational branch of the association known as Epsom College, which, it is hardly necessary to observe, is quite distinct from the eleemosynary side. Since the foundation of the College by Mr. Propert close upon 50 years ago important additions have from time to time been made to the buildings and land, so that, whereas in the early days only 150 boys could be admitted, there is now ample accommodation for 350 boys. Our readers will be glad to know that some important additions have been made during the last few years, comprising a

lower school for 100 junior boys, a laundry, the enlargement of the chapel, an addition of 15 acres of land, which will prevent undesirable buildings from being erected in close proximity to the College, and an enlarged laboratory and lecture theatre. It is hardly necessary to refer to the value of a separate school for junior boys, since none know better than medical men how desirable it is from many points of view that young boys should be trained away from their seniors. The foundation-stone of the lower school was laid in 1895 by H.R.H. the Prince of Wales, accompanied by their Royal Highnesses the Princess of Wales and the Princess Victoria of Wales. The school is complete in itself and has a separate matron and its own masters.

On Saturday last the Council and other friends of the College met at Epsom to hand over formally to the school the enlarged laboratory and lecture theatre which have been partly built from a legacy of £500 left by the late Mr. P. H. Maddock, a master of the College, who died in 1898. It would be difficult to find any better proof of the value of the work done at Epsom than the fact that a master who was familiar with every detail connected with the school should leave to it all his books and pictures and, in addition, bequeath so handsome a sum to the governing body to be used for the benefit of the College; and the Council could hardly have chosen a more useful way of perpetuating the memory of a master whose heart was always in his work. In arranging the laboratory provision has been made for giving the teacher complete supervision and for preventing students from having occasion to leave their work. Teak benches for 26 boys have been fitted, but there is room for additional accommodation. The arrangement is very compact. There are five double benches for four students, working two aside, and each student has two drawers, two cupboards with knee space between, and two gas-supplies, the taps of which are in front, though the gas points are at the back of the bench. On each side of the bench there is a sink and there is one water-tap with two side leads for every two students. At the end of each bench there is a fume cupboard with sliding, counterpoised doors accessible from both sides of the bench. The shelves for reagents are lined with glass plates. At one end of the room there is a similar bench for six students, with a fume cupboard at each end, and at the other end of the room there is a teak bench for general work, a slate bench with hood over for furnace work, and distillations, and a general sink with a draining-board. The waste from all sinks is conveyed by means of open channels under the floor to the gulley outside. Over each bench there is a double gas bracket, which thus gives one burner to each student. Sulphuretted hydrogen is made in two generators and is laid on to each fume cupboard.

As to the educational successes of the College we have frequently referred to them. In three recent years 10 scholarships or exhibitions ranging in value from £30 to £80 and one sizarship of £30 were gained at the Universities of Oxford and Cambridge for classics, mathematics, science, and history. The results of examinations held by the University of London and by the Oxford and Cambridge Schools Examination Board have been exceedingly satisfactory. At the London Matriculation Examination 48 boys have passed during the past three years, including one in honours, and 18 boys have passed the whole of the Preliminary Scientific Examination and 11 others part of it. At the Joint Universities' Examinations 29 higher certificates and 108 lower certificates have been obtained during the same period. For those boys who contemplate medicine as a profession it would be difficult to find a school which offers so many advantages as are offered by Epsom College. There are no fewer than nine medical scholarships of from 120 guineas to £150 in value at the hospital schools in London, and of 15 other scholarships or exhibitions offered five are of £15 in value, two are of £21, two are of £27, one is of £30, another is of £40, two are of £50, and two are of £60. As the College is recognised as a school of science by the Committee of the English Conjoint Board boys are prepared for Parts I. and III. of the first examination. The school fees are very moderate when compared with those charged by schools of the same class. The ordinary fee is £70 a year, but all sons of medical men are allowed a rebate of £10 and a few sons of medical men in reduced circumstances are admitted at £31 10*s.* a year. The Council offer annually entrance scholarships of £30 a year, open to all comers, and are anxious that the College should not be considered as exclusively for the sons of medical men, since they are convinced that "class" schools are undesirable. Fifty of the boys are Foundation scholars and they are boarded, clothed, and educated free of charge, the whole cost being borne by the charitable side of the institution.

THE GENERAL MEDICAL COUNCIL: ELECTION OF DIRECT REPRESENTATIVES, 1901.

MR. GEORGE BROWN'S ADDRESS TO THE REGISTERED PRACTITIONERS OF ENGLAND AND WALES.

FELLOW PRACTITIONERS,—As the term for which you elected Dr. Glover and myself in 1896 to represent you in the General Medical Council will expire on Jan. 1st next, you will shortly be called upon to fill the seats which will thus become vacant. I beg to inform you that it is my intention to offer myself for re-election and I venture to hope that my efforts to serve your interests during the four and a half years I have had the honour to represent you will insure me a renewal of your confidence.

It will be in the recollection of many of you that at the last election I pledged myself, if successful, to do my utmost to carry out a definite line of action in regard to five questions of great importance as affecting the well-being of the profession. Respecting these, it may be convenient if I as briefly as possible report progress.

1. *Amendment of the Medical Acts with a view to the suppression of unqualified practice.*—As yet it has been impossible to persuade the Council to take action in favour thereof, but as some of the most powerful opponents of medical reform have during the last year or two ceased to be members of the Council and their seats are now occupied by others whose views are more in harmony with those held by the bulk of the profession, I am not without hope that medical reform will be regarded with more favour in the future, although some outside pressure may be necessary before the Council takes any practical steps to promote a Bill to amend the Medical Acts in the direction indicated.

2. *To prevent sick clubs and dispensaries whose agents canvass for patients from obtaining the services of registered practitioners.*—It is a great satisfaction to me to know that I have assisted in passing a resolution expressing the disapproval of the Council with those practitioners who associate themselves with clubs whose agents systematically canvass for patients. This resolution is a step in the right direction, but as the expression of a pious opinion it will, I fear, be of little use. The degrading practice can only be suppressed by dealing with it in the same manner as offences which are regarded as infamous in a professional respect. I shall always insist, as I have in the past, that the absence of a wage-limit is likely to lead to the abuse of clubs and dispensaries, as well as to friction and contentions among neighbouring practitioners.

3. *To oppose the Bill for the registration of midwives.*—Through the action initiated by me at the May session, 1897, notwithstanding that the Council had previously in very decided language, to use the late Sir Richard Quain's own words, declined to interfere with the proposed legislation respecting the practice of midwives, the Council appointed a special committee to consider the proposed measure. As a result the Lord President of the Privy Council was informed that the Council "would earnestly deprecate its passing into law." Happily, in consequence of the opposition thus raised, the mischievous Bill did not receive the sanction of Parliament, and I have no fear that it ever will become law if the profession as a whole continues to exercise the vigilance and activity in opposing the measure it has hitherto done. Much will depend upon the votes recorded in this election, and you may rely upon me that my opposition to legalising midwives as independent practitioners will be as keen as ever, and I should like both midwives and all unqualified practitioners made legally responsible for any damage they may cause to mother or child or any other person. I am, however, in favour of legislation to insure the better education and registration of obstetric and other nurses to act under the direct supervision of medical practitioners.

4. *The raising of the standard of medical education.*—In

accordance with my pledges I have worked in harmony with those members of the Council who are in favour of raising the standard of education, and it is satisfactory to report that during the last year or two regulations have been adopted lengthening the course of professional study and raising the standard of preliminary examinations. It is to be regretted that the Royal College of Physicians and the Royal College of Surgeons of England appear disposed to dispute the authority of the Council in regard to this matter. Although I am a Member of the College of Surgeons I feel that in all questions relating to medical education the fiat of the Medical Council should be absolute, and as long as I continue to be a member of that body my action will be guided by a sincere wish to support its authority. Unless the Council's authority be maintained medical education will soon become chaotic.

5. *Increased direct representation.*—On two occasions I have proposed motions calling upon the Council to make application to the Privy Council to obtain additional direct representation for England and Wales, as provided for in the Medical Act of 1886, but I regret to say that on each occasion the proposition was rejected by a large majority. If I continue to represent you on the Council I shall again press this question upon the members, but I fear nothing will be accomplished in that direction unless a direct appeal to Parliament be made. I shall do my utmost, both inside and outside the Council, to assist those who consider that their representatives on it should be elected by the graduates of the universities and the members of the corporations, and not solely by the senates and councils respectively. It is a satisfaction to me to report that during my term of office I have taken an active part in bringing about the promulgation of new regulations respecting the employment of unqualified assistants which have done more to protect the public against unqualified practice and to elevate the profession than any other measure adopted by the Council since the profession has had the privilege of sending Direct Representatives to the Council.

There are other points I would have desired to mention in this address, but must deal with them at the public meetings. I would therefore conclude by thanking you for the generous consideration shown towards me during my term of office, and by giving you the assurance that should you honour me by re-electing me as one of your representatives I shall, as in the past, do all in my power to serve your interests and to uphold the honour and dignity as well as the interests of our profession.

I remain, fellow practitioners, your obedient servant,

6, Gibson-square, London, N., October, 1901. GEORGE BROWN.

MR. GEORGE JACKSON'S ADDRESS TO THE REGISTERED PRACTITIONERS OF ENGLAND AND WALES.

LADIES AND GENTLEMEN,—Having been invited by the Incorporated Medical Practitioners' Association, in conjunction with Mr. George Brown, to become a candidate as a Direct Representative on the General Medical Council, I have acceded to their request, and am encouraged to do so by the fact that I obtained 4082 votes at the last election, although very late in the field.

On the last occasion, omitting a bye-election caused by the resignation of Dr. Rentoul, the contest turned principally on the question of the registration of midwives, the votes in favour of it being only 8443, as against 26,040. I am now, as then, opposed to the registration of midwives, the creation of an inferior order of practitioners. The only way to settle this vexed question is by the registration of all nurses, who will be obliged to act under the direct control of duly qualified medical practitioners.

The objects which should engage the attention of the General Medical Council in the immediate future should be in my opinion:—

1. The reform of the Medical Acts, so as to provide for direct representation of the medical profession in every case except the Crown nominees.

2. Raising the standard of the entrance examinations and limiting the age of entrance so as not to be under 17 years.

3. The one-portal system of entrance to be secured by forming a Board of Examiners, composed of delegates from the present examining bodies.

4. Such an alteration of the Acts which will give the Council power to suppress quacks, &c., who practise medicine and surgery under various forms of colourable pretences.

5. A more definite pronouncement against medical men acting as medical advisers to clubs and insurance societies whose agents tout for members.

For the information of those to whom I am unknown personally I may state that I have taken an active part in medical politics for more than 20 years. In conjunction with Mr. Reginald Harrison I set on foot some 20 years ago a movement which had for its object the voting by voting papers for the election of members of the Council of the Royal College of Surgeons, which was successful. About 15 to 16 years ago I endeavoured to establish locally a medical sick assurance society, and thus helped to prepare the way for the society which at present exists, and does such good work. In 1895 I was President of the Incorporated Medical Practitioners' Association, and had previously founded the Devon and Cornwall local branch of the same, which has done good work in checking irregular practice and the like. Last year I was a delegate of the Plymouth Medical Society to the medical organisation meeting at Manchester, and was appointed a member of the committee, which has had a great deal to do with the reform of the British Medical Association.

I have assisted in the work of establishing the Three Towns (Plymouth, Devonport, and Stonehouse) Provident Dispensary in conjunction with the local branch of the Incorporated Medical Practitioners' Association, which works on the principle of a wage-limit, *the management being entirely in the hands of the members of the staff.*

Asking the favour of your vote and interest,

I remain, your obedient servant,

GEORGE JACKSON,

F.R.C.S. Eng., ex-President and Vice-President of the Incorporated Medical Practitioners' Association and of the Devon and Cornwall Branch of the same, and ex-President of the Plymouth Medical Society.

10, Portland-villas, Plymouth, October, 1901.

DR. GLOVER.

Dr. Glover has, we regret to learn, lately suffered from a bad eye; he is now, however, much better. We are asked by him to say that he regrets much that, acting under strict medical advice, he is obliged to abstain from attending all public meetings for the present.

He feels confident that his constituents will realise with what reluctance he has to decline invitations from various places where it would be a great pleasure to him to meet them for the discussion of current questions. He ventures to hope that the inconvenience to them will be lessened by the fact that his views have been fully stated and reported on several recent occasions.

MR. VICTOR HORSLEY.

When Mr. Horsley was elected a Direct Representative of the profession on the General Medical Council at a by-election he said that when the next quinquennial election came round he would resign and offer himself for re-election at the same time as the other candidates, thereby saving the profession the expense of multiple elections. He is now legally advised that he cannot take this course, as the wording of the Act places any man who resigns his seat on the General Medical Council in the position of a dead man. A successor must be elected; he cannot himself be re-elected.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 33 of the largest English towns 6451 births and 3684 deaths were registered during the week ending Oct. 19th. The annual rate of mortality in these towns, which had been 15·6 and 15·9 per 1000 in the two preceding weeks, further rose last week to 16·8 per 1000. In London the death-rate was 16·0 per 1000, while it averaged 17·3 in the 32 large provincial towns. The lowest death-rates in these towns were 10·3 in Derby, 11·1 in Bristol, 11·2 in Croydon, and 11·5 in Huddersfield; the highest rates were 21·9 in Salford, 22·0 in Blackburn, 26·9 in Newcastle, and 28·8 in Gateshead. The 3684 deaths in these towns last week included 467 which were referred to the principal zymotic diseases, against 525 and 485 in the two preceding weeks; of these 467 deaths, 168 resulted from diarrhœal diseases, 81 from measles, 71 from diphtheria, 59 from "fever" (principally enteric), 47 from scarlet

fever, 30 from whooping-cough, and 11 from small-pox. No deaths from any of these diseases occurred in Croydon or in Derby; in the other towns they caused the lowest death-rates in Cardiff, Swansea, and Halifax, and the highest rates in West Ham, Norwich, Blackburn, Sheffield, and Gateshead. The greatest proportional mortality from measles was recorded in Norwich, Blackburn, and Sheffield; from scarlet fever in Salford; and from diarrhœal diseases in West Ham, Hull, Gateshead, and Newcastle. The mortality both from whooping-cough and from "fever" showed no marked excess in any of the large towns. The 71 deaths from diphtheria included 33 in London, six in Sheffield, five in Leicester, four in Brighton, three in Portsmouth, and three in Leeds. Eleven fatal cases of small-pox were recorded in London, but not one in any other of the 33 large towns; there were 172 cases of small-pox under treatment in the Metropolitan Asylums hospitals on Saturday, Oct. 19th, against numbers increasing from 11 to 175 on the 10 preceding Saturdays; 47 new cases were admitted during the week, against 44, 51, and 37 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had risen from 2994 to 3280 at the end of the six preceding weeks, had further increased to 3346 on Saturday last; 407 new cases were admitted during the week, against 460, 426, and 422 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 137, 132, and 186 in the three preceding weeks, further rose last week to 196, but were 72 below the corrected average number. The causes of 39, or 1·1 per cent., of the deaths in the 33 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Nottingham, Bradford, Leeds, Hull, and in 12 other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Leicester, Liverpool, Blackburn, and Sunderland.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 14·5 and 16·1 per 1000 in the two preceding weeks, further rose to 16·9 per 1000 during the week ending Oct. 19th, and was slightly above the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 11·8 in Aberdeen and 13·4 in Leith to 18·9 in Perth and 22·9 in Greenock. The 537 deaths in these towns included 30 from diarrhœa, 15 from measles, 12 from diphtheria, 12 from whooping-cough, five from scarlet fever, and five from "fever." In all, 79 deaths resulted from these principal zymotic diseases last week, against 82 and 62 in the two preceding weeks. These 79 deaths were equal to an annual rate of 2·5 per 1000, which was 0·4 above the zymotic death-rate last week in the 33 large English towns. The fatal cases of diarrhœa, which had declined from 53 to 32 in the four preceding weeks, further fell last week to 30, of which 11 occurred in Glasgow, five in Dundee, four in Edinburgh, three in Aberdeen, and three in Paisley. The deaths from measles, which had been 12, 14, and six in the three preceding weeks, rose again to 15 last week, and included 14 in Glasgow. The fatal cases of diphtheria, which had been six in each of the two preceding weeks, increased last week to 12, of which seven were registered in Glasgow and two in Greenock. The deaths from whooping-cough, which had declined from 13 to five in the four preceding weeks, rose again to 12 last week, and included eight in Glasgow and three in Edinburgh. The fatal cases of scarlet fever, which had been seven in each of the two preceding weeks, declined last week to five, of which two occurred in Glasgow and two in Greenock. The deaths referred to different forms of "fever," which had been six in each of the two preceding weeks, decreased to five last week, and included three in Edinburgh. The deaths attributed to diseases of the respiratory organs in these towns, which had been 101, 77, and 75 in the three preceding weeks, rose again last week to 97, but were 20 below the number in the corresponding period of last year. The causes of 22, or more than 4 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 17·8, 19·9, and 19·7 per 1000 in the three preceding weeks, rose again to 19·9 per 1000 during the week ending Oct. 19th. During the past four weeks the death-rate has averaged 19·3 per 1000, the rates during the same period being 15·2 in London and 15·6 in Edinburgh. The 143 deaths of persons belonging to Dublin registered during the week under notice were within one of the number in the preceding week, and included 10 which were referred to the principal zymotic diseases, against 17, 20, and 21 in the three preceding weeks; of these, five resulted from diarrhœa, three from "fever," one from diphtheria, and one from whooping-cough. These 10 deaths were equal to an annual rate of 1·4 per 1000, the zymotic death-rates during the same period being 1·8 in London and 2·0 in Edinburgh. The fatal cases of diarrhœa, which had been 11, 9, and 14 in the three preceding weeks, declined again to five last week. The deaths referred to different forms of "fever," which had been three, eight, and six in the three preceding weeks, further declined last week to three. The 143 deaths in Dublin last week included 36 of children under one year of age and 42 of persons aged upwards of 60 years; the deaths of infants corresponded with the number recorded in the preceding week, while those of elderly persons showed a very marked increase. Six inquest cases and three deaths from violence were registered; and 47, or about one-third, of the deaths occurred in public institutions. The causes of four, or nearly 3 per cent., of the deaths in Dublin last week were not certified.

THE SERVICES.

REFORM IN THE WAR OFFICE.

THE following statement has been issued by the War Office with regard to the War Office Council.

1. The Secretary of State has directed that in future the War Office Council shall be constituted as follows:—

President—
The Secretary of State for War.
Members—
The Commander-in-Chief.
The Parliamentary Under-Secretary of State.
The Permanent Under-Secretary of State.
The Financial Secretary.
The Quartermaster-General.
The Inspector-General of Fortifications
The Director-General of Ordnance.
The Adjutant-General.
The Director-General of Mobilisation and Military Intelligence.
The Director-General, Army Medical Department (for medical and sanitary questions).
The Secretary of the Council.
And such other members of the Staff of the War Office as may be specially summoned from time to time.

2. In the absence of the Secretary of State the Commander-in-Chief will act as President.

3. The Council will meet on Mondays, unless otherwise ordered, at 12 o'clock, in the Secretary of State's room.

4. The Council will discuss such matters as may be referred to it by the Secretary of State and any question brought before it by individual members. In order that a *précis* may be prepared notice of the matters for discussion, together with the office papers on the subject, should reach the Secretary not later than the Wednesday evening before each meeting.

5. Records of the proceedings will be kept and copies will be supplied to each member.

In addition to the foregoing there is to be a *Permanent Executive Committee of the War Office*, under the presidency of the Permanent Under-Secretary of State, or in his absence of the Assistant Under-Secretary of State, with certain military and other officials, and the Deputy-Director-General, Army Medical Department, or an officer selected by the Director-General, as members; and the present *Army Board*, of which the Director-General of the Army Medical Service is constituted a member, will be continued. Special departmental committees will also be formed on approval of the Secretary of State for War whenever required, and forward their reports in the first instance marked to the Secretary of the War Office Council.

ROYAL NAVY MEDICAL SERVICE.

The following appointments are notified:—Staff Surgeon T. J. Crowley to the *President*, additional, for three

months' course for hospital study. Surgeon H. C. Arathoon to the *Vivid*.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel U. J. Bourke is held in readiness to embark for service in Mauritius. Major E. H. Myles is appointed to the medical charge of the Station Hospital at Kasauli and Captain H. A. L. Howell is appointed to the medical charge of the Station Hospital at Khandalla. Captain G. B. Stanistreet, on arrival in the Southern District for duty, is posted to Parkhurst and takes over medical charge of the troops and Station Hospital there from Major A. E. Tate.

Major James E. Nicholson to be Lieutenant-Colonel, Dated Sept. 4th, 1901.

VOLUNTEER CORPS.

Artillery: 1st Cheshire and Carnarvonshire: Surgeon-Major E. J. Lloyd to be Surgeon-Lieutenant. *Rifle:* 1st Volunteer Battalion the Royal Warwickshire Regiment: Supernumerary Surgeon-Lieutenant A. H. McDougall to be Surgeon-Lieutenant on the Establishment.

SOUTH AFRICAN WAR NOTES.

Captain G. S. McLoughlin, R.A.M.C., has been discharged from hospital to duty.

The following are on passage home:—Lieutenant-Colonel J. McLaughlin, R.A.M.C., and Civil Surgeons H. H. G. Knapp, J. A. H. Brincker, and W. J. Moir.

Surgeon Lieutenant-Colonel C. R. Kilkelly, C.M.G., Grenadier Guards, principal medical officer of the Imperial Yeomanry Hospital at Elandsfontein, in his report for the week ending Sept. 28th shows that the total admissions to that branch of the Imperial Yeomanry Hospitals were 294, and that there remained in the hospital at that date seven officers and 116 non-commissioned officers and men. Mr. J. G. Hamilton, the honorary civilian director of these hospitals, in his letter of this week, reports that Messrs. Petersen and Wentworth have added greatly to the brightness of the hospital by sending several wagon-loads of young trees and shrubs, which were being planted round the tents and on the southern boundary of the camp. Numerous other friends had contributed bulbs and flowers, giving the grounds almost the appearance of a horticultural show.

AN AMERICAN HOSPITAL SHIP.

In the *Archives de Médecine Navale* for September Dr. Bellot, a senior medical officer in the French navy, gives a highly appreciative account of the American hospital ship *Relief* which he had the opportunity of inspecting recently in Chinese waters. Being himself in medical charge of the *transport-hôpital la Nive* the writer was well qualified for his task and evidently carried it out with great care and minuteness. Originally the *Relief* was built for river and coasting passenger traffic, but when the war with Spain broke out she was converted into a hospital ship under naval management. Capable of steaming 18 knots per hour and with sufficient coal-storage for a voyage between the Sandwich Islands and Japan she was in most respects well suited to her new career, but on the other hand her light draught detracted from her seaworthiness. What seems to have chiefly impressed Dr. Bellot was the spacious loftiness between decks, together with the abundance of light and fresh air which pervaded the whole vessel. The sick were accommodated on two decks reaching from stem to stern, the crew and machinery being established below, and the officers above in a structure which is described as "*une sorte de château.*" Almost flush with the water there was "*une immense porte*" capable of admitting laden stretchers with the utmost facility, while internally the numerous channels of intercommunication were thoroughly in keeping. Painted white, with slight gold lines for relief, the interior of the ship, as well as the fittings and appliances, was washable throughout, lending itself readily to efficient disinfection. In the wards there were two layers of beds, one above the other, but each patient had a complete bedside equipment to himself. An apparatus for keeping food cool in summer or warm in winter struck Dr. Bellot as particularly admirable. It consisted of a wheeled receptacle with double walls affording space for ice or hot water according to season. The French officer drank a glass of milk from one of these chests and found it "as agreeable as the most esteemed fresh milk." It came from New Zealand, having been preserved without either sugar or evaporation, but he regretted that he could not find out the name of the producer. In one of the kitchens that was inspected the cooking was done by electricity. To obtain any required temperature all that was necessary was to press a button. Needless to say, the "sanitary arrangements," as water-closets, baths, &c., are popularly called, were not only excellent, but even luxurious, and that just as much for the rank and file as for the officers; while "everywhere hot and cold water, fresh or salt, circulated on demand." On the upper deck there was an operating-room which with its equipment "approached perfection," and although slightly smaller the research laboratory was supplied with all that could be desired. The *Relief* was entirely under the control of the chief medical officer.

SOUTH AFRICAN AFFAIRS.

There is but little to be chronicled in the way of war news. The process of grinding down the enemy's forces is a slow machine-like method. It seems to be the only one, however, that can be pursued under the circumstances. The extent of country over which the war is spread and the numerous independent bodies of Boers in the field and the apparent impossibility of surrounding them and compelling them to fight are the difficulties. The supply problem has become a gigantic one for the War Office in view of the number of our forces in the field, the concentration camps, and the very large number of Boer prisoners who have to look to this country for all they want. The number of lives among the refugees being sacrificed to the exigencies of war in the concentration camps despite all our efforts is pitiful enough, but it seems to be mainly attributable to neglect and ignorance of the most rudimentary laws of hygiene on the part of the Boer population, to the prevalence of epidemic diseases and the extreme difficulty of supplying and preparing suitable food for infants and children. All that can be said is that had the Boer women and children been left to shift for themselves—a course which probably any other nation than England would have taken—the results would have been infinitely worse, although such a policy might in the end have proved a more merciful one. Their natural protectors would not then have been free to fight against us with the knowledge that their familie w ere being all the while taken care of. The sick returns from the seat of war are, as regards British troops, altogether more favourable than they were.

WARM CLOTHES FOR RETURNING SOLDIERS.

Major-General the Hon. H. F. Eaton asks us to allow him through the medium of our columns to express his thanks to all those who so generously responded to his appeal from the Soldiers and Sailors Help Society, for clothing for soldiers returning from South Africa, and points out that their special needs at this season are warm overcoats and strong boots, which will be most gratefully received by Captain Simpson, 70, Victoria-street, S.W.; at the employment branch of the Soldiers and Sailors Help Society, 115, Ebury-street, S.W.; at the offices of the Soldiers and Sailors Help Society, 17, King-street, St. James's, S.W.; by Captain S. Waters, 23, Overton-road, Brixton, S.W.; and by Mr. Oliver Williams, 71 and 72, King William-street, E.C.

PORTLAND HOSPITAL REPORTS.

Major-General the Hon. Herbert F. Eaton, secretary of the Portland Hospital, asks us to mention that members of the Portland Hospital staff or patients who have passed through this hospital may obtain one of the remaining copies of the reports on remitting 3*s.* to Mr. Oliver Williams, 71 and 72, King William-street, E.C.

ROYAL ARMY MEDICAL CORPS SOUTH AFRICA FUND.

A meeting of the General Committee of this fund will be held to-day (Friday, Oct. 25th) at 5 P.M., at 58, Portland-place, W., to consider the despatch of a Christmas gift to the corps and the closing of the fund. H.R.H. Princess Christian of Schleswig-Holstein will preside.

The King has been pleased to approve of the appointment of Surgeon-General W. Taylor, C.B., to be Director-General, Army Medical Service, and on the retirement, on Dec. 31st next, of Surgeon-General H. S. Muir, C.B., that of Lieutenant-Colonel A. Keogh, C.B., to be Deputy Director-General, with the temporary rank of Surgeon-General.

Correspondence.

"Audi alteram partem."

"NOTIFICATION OF INFECTIOUS DISEASE."

To the Editors of THE LANCET.

SIRS,—As my name has been incidentally mentioned by Sir W. T. Gairdner in his letter on the above subject in THE LANCET of Oct. 19th, p. 1074, I trust that I may be permitted to record two instances that strongly support his argument for an amendment of the Notification Act. Five years ago I was called to a young woman, aged 18 years, with a generalised papular rash, a temperature of 103° F., and a history of severe illness for three days. The mother was certain that the patient had measles when a child, so the question of German measles was raised by her. At the time I had only been two years in general practice, so that my experience of infectious and other diseases was limited. I was unable to make a definite diagnosis of the case, so I prescribed for the urgent symptoms and said that I should call the following day. In the interval I went over again the literature of German measles and all skin eruptions with a temperature and concluded by forming a strong suspicion that this was a case of typhus fever. I had never to my knowledge, as a student or as a practitioner, seen a case of typhus fever, for, mainly owing to the brilliant work of Sir W. T. Gairdner while medical officer of health of the city, it has been in recent times a comparatively rare disease in Glasgow. On calling the next day I found the patient no better but still I could not definitely say that it was typhus fever. To call in a consultant was out of the question as the people were so poor that they could not pay for my second visit. Becoming alive to the fact that if it was a case of typhus fever then the sooner the patient was in hospital the better for herself and the community at large I sent to Dr. J. B. Russell, the then medical officer, a notification of typhus fever, with a note of interrogation after it to imply an indefinite diagnosis. He afterwards informed me that the case was typhus fever. The patient was promptly removed to the hospital while the other members of the household, two of whom, I believe, developed typhus fever, were removed to the reception house for contacts. There had not been a case of typhus fever in the city for months prior to it and there was no other case of typhus fever from the same locality for months after this. I was convinced at the time, and am still more convinced from what I have seen since, that if I had waited until I could have formed an exact diagnosis I should have had, not one, but several cases to notify, for the case occurred in a locality which has a density of something like 300 per acre.

The other instance became so famous that I confess to much diffidence in referring to it. It was the first to be recognised of the cases of bubonic plague in the outbreak here last year. These cases are fully reported in THE LANCET of Sept. 8th, 1900, p. 758, and the point I wish specially to emphasise, as bearing on the question under discussion, is that here again an indefinite and not a definite diagnosis was notified. When I examined these three cases in the same house, on my first and only visit, there was no difficulty in saying that whatever was the exact nature of the disease it was undoubtedly infectious. I determined to notify them at once as cases of enteric fever, with a query to indicate an incomplete diagnosis. I did so after calling on the medical man in attendance, who notified them at the same time in a similar manner. If we had delayed much longer for the purpose of forming an exact diagnosis what would have happened is obvious.

One word on the opposite side of the question. The other day I sent into the Ruchill Fever Hospital a baby of nine months notified as diphtheria (?). It was recovering from an attack of measles, when it suddenly developed that hoarseness and urgent suffocative breathing that so often indicate the beginning of laryngeal diphtheria. I was officially informed that the case was regarded as one of simple laryngitis, while the mother told me in angry tones that I had made a great mistake, for the child had no diphtheria but the "dregs" of measles, and was put among the patients convalescing from that disease where it is at present. Now, what harm was done in this case? If I could have isolated the child for a day or two with any degree of safety to others I would never have sent it away. But isolation was impossible in a house full of children as well as a block full of children, and I knew from previous experience that while waiting for the development of conclusive symptoms, and if it had been a case of laryngeal diphtheria, I should have more than one case to notify. The only harm done—and it was slight—was to my professional reputation, and even this might have been avoided if the mother had been simply told whether the child was better or worse and no opinion expressed on the diagnosis. The only other point is the notification fee. Personally I do not care a straw whether I am allowed it in this and similar cases. I could, however, claim it for the general practitioner solely on economic grounds, inasmuch as the majority of his suspicions will be confirmed and by thus limiting the spread of the disease he will considerably diminish the number to be treated in hospital at the public expense.

I am, Sirs, yours faithfully,

Glasgow, Oct. 21st, 1901. THOMAS COLVIN.

ROYAL MASONIC INSTITUTION FOR BOYS: CASE OF REGINALD E. A. WEBSTER.

To the Editors of THE LANCET.

SIRS,—May I be allowed on behalf of all interested in Reginald E. A. Webster's election to the Royal Masonic Institution for Boys to thank you and the many medical Masons who so kindly helped us? By your aid he was placed first on the list of 20 successful candidates with 7137 votes.

I am, Sirs, yours faithfully,

Queen Anne-street, W., Oct. 15th, 1901. JOSEPH POLLARD.

THE TOXIC ACTION OF BELLADONNA PLASTER.

To the Editors of THE LANCET.

SIRS,—In confirmation of your remarks on the above in an annotation in your issue of Oct. 19th, p. 1061, may I refer you to the following extract of my "Rough Notes on Remedies" which appeared in THE LANCET several years ago:—

"I may here remark that special caution ought to be observed in ordering or applying a belladonna plaster of large size. Anything over six, or even five, inches square is almost sure to produce some systemic effects, such as slight giddiness and uncertainty of gait and vision; and later, when the plaster produces pustular irritation, a fresh absorption of belladonna sometimes takes place, with a more decided occurrence of the above symptoms, and so susceptible are some that the mere application of a small belladonna plaster will produce the above effects with great violence."—I am, Sirs, yours faithfully,

WM. MURRAY, M.D. Durh., F.R.C.P. Lond.

Swinburne Castle, Northumberland, Oct. 19th, 1901.

THE MORALS OF THE CONCIERGE.

To the Editors of THE LANCET.

SIRS,—I quite agree with what your Special Commissioner says about the *concierge*. I have considerable experience of him myself in Paris and he is a well-known character on the French stage. All the same I think the remarks hardly apply in this country where any system of espionage is not only unknown but abhorrent. I was very precise in defining the duties imposed on caretakers by the Workmen's Dwellings Company—viz., (1) to select tenants, satisfying themselves first, that they are of good character, and secondly, that the income of their household is low enough to justify their admission into the company's property; (2) to supervise the people generally, to prevent over-crowding and sub-letting, and to enforce order and quietness; (3) to prevent the improper use of the water-supply, water-closets, washing-houses, dust-shafts, &c.; (4) to enforce the cleansing of stairs, landings, balconies, courts, chimneys, &c.; (5) to report infectious disease to the authorities; and (6) to execute minor repairs.

I am satisfied that strict caretaking of all tenement houses on these lines would go a long way to get rid of the dirt and

disease which are looked upon as almost inseparable from so-called slum dwellings.

I am, Sirs, yours faithfully,

Glasgow, Oct. 21st, 1901. D. M. STEVENSON.

MALARIA AND MOSQUITOES.

To the Editors of THE LANCET.

SIRS,—In the early "eighties" I was practising on the Diamond Fields, South Africa, where malaria of the remittent type was very prevalent. At that time, I can safely say, there were no mosquitoes in camp. Our population numbered some 70,000. Some two or three years later, with the extension of the railway from Cape Town, came the first batch of these pests. But malaria, notwithstanding, steadily decreased both in my own practice (by no means a small one, as I was surgeon to various compounds in addition to being acting district surgeon) and elsewhere, generally speaking. I am a happy hunting-ground for all sorts of vampires—if I may here use the expression—and have endured martyrdom from bites. This week, whilst sitting on the front at Southend, I was bitten by a mosquito—I regret I was not sufficiently interested to preserve the specimen—and suffered worse than I ever remember, even abroad. I am surely saturated with mosquitoine (may I coin a word?) yet I am immune from neither malaria nor mosquitoes.

I am, Sirs, yours faithfully,

DAVID HARRIS,
Formerly Medical Officer of Health, Diamond Fields.

Imperial Service Club, Piccadilly, Oct. 9th, 1901.

"THE AFTER-COMING HEAD; PREVENTION OF ASPHYXIA."

To the Editors of THE LANCET.

SIRS,—Dr. Blacker (THE LANCET, Oct. 19th, p. 1034) says: "..... It becomes a question whether it is not better practice to extract the head at once, even at the risk of a bad tear of the perineum, rather than to attempt to initiate the act of respiration while the head is still within the vagina." I should have thought cases must at times occur in which the tube method would provide just the few minutes' extra time required for proper relaxation of a rather tight outlet. I have often been surprised at the rapid relaxation which sometimes occurs during the four or five minutes preceding the birth of the head in a normal delivery, and this seems to me a reason why in a breech case a gain of a few minutes between the delivery of the trunk and of the head might sometimes be most useful. I should be grateful to Dr. Blacker, who points out that the method referred to is not approved—or even mentioned—by modern authorities, for further information on this point, and should like to know (1) if the tube method sometimes fails, and if so, why? (2) what are the objections to its use?

I am, Sirs, yours faithfully,

Upper Tooting, Oct. 22nd, 1901. EDWIN SMITH.

"THE HOME OFFICE ARBITRATION ON LEAD-POISONING."

To the Editors of THE LANCET.

SIRS,—I see from your annotation on this subject that you are under some misapprehension. You speak of the manufacturers and the workpeople as "one side" and "the other side" and imply that the Home Office is arbitrating between them, like the Board of Trade in industrial disputes. The case is entirely different. The arbitration is between the Home Office and the manufacturers *plus* the workmen, both of whom object to the proposed rules. It is quite right that the workmen should be represented and I hope they will be, equally with the manufacturers, but to speak of the two as "one side" and "the other side" is to mis-state the position. They are both, for different but not antagonistic reasons, on one side; the Home Office is the other.

I am, Sirs, yours faithfully,

Savile Club, W., Oct. 22nd, 1901. A. SHADWELL, M.D.

THE RECONSTITUTION OF THE ROYAL ARMY MEDICAL CORPS.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Oct. 5th, p. 929, you published the scheme for the reorganisation of the army medical services and in your leading article you stated the favourable impressions which you had received from your first perusal of the report of Mr. Brodrick's Committee, and expressed a lively sense of recognition of the earnest attempt which had been made to place the Army Medical Services upon a new and better footing. You regarded the report as the sketch of a scheme moulded on certain lines and admitting of a good deal of freedom of action in the way of such improvements and modifications as might hereafter be found necessary or advisable, pointing out that some of its recommendations must as regards their effect and working partake more or less of the nature of an experiment. I have now had time and opportunity to consider thoroughly the proposals, and while agreeing that this scheme is an earnest attempt to set the Royal Army Medical Corps on a basis of real excellence, yet I feel that carefully considered comments, even when adverse, can only be of service to the authorities. The proposals which I believe will not prove to be acceptable are partly the result of the composition of the Committee, which perhaps contained too much of the civilian element to enable it to understand correctly military medical problems, and are partly due to the complexity of the questions involved and the great practical difficulties which stand in the way. There is much that is good, indeed very good, in the proposals, but I believe that I am right in stating that certain modifications are absolutely necessary before a sufficient number of men will be attracted to the ranks of the Royal Army Medical Corps.

It is a fair arrangement that opportunities are to be given for suitable civilians over age who have served with troops in the field to enter the corps, and an excellent point that all candidates shall appear before an Advisory Board who will decide whether they may be allowed to compete for commissions. This appearance will give the required opportunity for the consideration of the social status of each candidate and of his fitness from this important point of view to hold a commission in His Majesty's army.

I have my doubts as to the "workability" of an Advisory Board with such extensive functions. Its number is, I think, too large for a working committee, and I fear that its observations and decisions may prove a cloak under which the sense of responsibility may in a great measure be lost by the Director-General. The pay of the civilian members has been fixed at too low a rate to prove an attraction to really good men; where an onerous duty to the State is required reward commensurate with the work and responsibility must be tendered. It must be remembered that an Advisory Board has been tried before and proved a conspicuous failure. It appears to me that the power and prestige of the Director-General will be diminished, though his pay is to be considerably increased. I am of opinion that his power should be retained and his usefulness be increased by appointing him to a seat on the Army Board, his opinion being limited to medical affairs, and that he should be given the real rank of a Lieutenant-General. The eleventh paragraph for the guidance of the Advisory Board is surely unnecessary, for it shows a want of confidence in the officers of the corps. It is, I think, a grave mistake to imagine that men of high training, military rank, and position will submit to a proposition that members of the Advisory Board may inspect the hospitals without notice of their intention. I am glad to see that it is proposed that the London examination shall be restricted to a clinical and practical examination in medicine and surgery, and that the subjects studied in the earlier days of the medical curriculum are not to be required from the selected candidates.

The scheme of sending lieutenants to Netley on probation for two months does not commend itself to me. I am surprised to see that the subjects of military surgery and tropical medicine are no longer apparently to form a part of the Netley curriculum, and I think that to cram the young lieutenants with bacteriology and hygiene for two months is a decided error; in two months little or nothing of these sciences can be usefully acquired, and I believe that the result will be the acquisition of an unpractical smattering of knowledge which will be only too readily forgotten.

The idea of allowing men holding resident appointments in recognised civil hospitals, or appointed thereto at such a date as will permit them to take up their duties immediately after they have passed the entrance examination for the Royal Army Medical Corps, is an excellent one, but I doubt the possibility of its practical application unless the numbers of the corps are to be largely increased. I remember hearing of one occasion when, at the commencement of a Netley session, the gentlemen who had held house appointments in civil hospitals were requested to stand up in the lecture theatre, the result being that nearly every man rose from his seat. With a regulation in force permitting men to enter the service before holding resident appointments I take it that the object of the candidates will be to enter as soon after qualifying as possible, and if the civil hospitals are willing to take them back for their house appointments but few men will be available in each batch to proceed to Netley and Aldershot for the appointed courses; but I rather doubt the willingness of the civil hospitals to give these posts to men who have already committed themselves to a career in which they can be of no future service to the consulting staffs of the various hospitals. I suggest that the period of a year passed as a house-surgeon or house-physician in a recognised hospital shall be allowed to count towards pension and promotion, whether the period were so spent before or after passing the entrance examination for the service. The time for which each lieutenant will be attached to a battalion is not specified, although a period of three years is implied. While considering this point a valuable one, as one destined to bring about a good feeling between the regimental and the military medical officer, I much doubt if any period of less than three years would suffice to do this.

The paragraphs which deal with the position of lieutenants after three years' service present an elaborate scheme which must have occupied considerable time in its preparation. I think it of importance that at the end of three years the services of an officer who has proved himself undesirable may be dispensed with, but what the opinion of candidates for the examination for commissions will be on this point is another question. In my experience youth is unconscious of its failings and shortcomings, but is little likely to place any confidence in such an unassured future. I altogether dissent from the proposition to accelerate promotion according to a scale of marks obtained at an examination: such a scheme is most difficult to carry out and must lead to envy, hatred, malice, and all uncharitableness. A far better plan, in my opinion, would be to give a graded pay at extra rates for the result of a practical examination, giving a separate rate of pay to men who reach the higher standards of efficiency and as far as possible employing them on special work, but allowing seniority to remain as it was in the corps. This criticism is equally applicable to the acceleration proposed as the result of the examination for the rank of major; I regard all such promotion as vicious and likely to bring about great dissatisfaction. On the other hand, to leave seniority as it was in each rank and to give extra pay to high-class specialists would be an excellent move and one which would meet a real want in the service as at present administered. The proposed sum of 2*s.* 6*d.* a day I regard as quite insufficient for this real need. I cannot imagine that officers will care to qualify as specialists to gain such an insignificant advantage. I regard the proposed examination before the completion of 20 years' service as an unnecessary evil. I maintain that to subject an officer of 45 years of age to such an ordeal is a ridiculous proposition and one which will keep candidates from coming forward for the public service. In no other learned profession is a man so examined for promotion to posts of responsibility—especially would it be wrong in a service like the Royal Army Medical Corps, for after men have been for years in India and other tropical countries where their physical and mental vigour is deteriorated it would be unfair to subject them to such examinations. If considered necessary, by all means let the promotion to the rank of lieutenant-colonel be by selection, but let this selection be a result of the qualifications shown by the officer as observed and reported on by the officers under whose command the 20 years of service have been completed.

I regard the touching of the pension of £1 a day after 20 years' service as one of the most serious mistakes proposed. Under this scheme the £1 a day cannot be counted on, and hitherto it has been one of the greatest attractions to the service. This retiring allowance must be always conceded or I feel certain that candidates will not be forthcoming from the schools. It is quite unfair, I consider, to expect that men will run the risks of tropical service and permanent ill-health if their future is not secured to them—many men are more or less broken down by 20 years of service and a sum of £2500 cannot in any way be considered an adequate provision, for it will only produce an income of two figures. The eligibility of officers for brevet promotion is a good one, and I note with satisfaction that it is to be given for distinguished service of an exceptional nature as well as for distinguished service in the field. Charge pay of a hospital is also a welcome introduction. The arrangements for the treatment of patients under the principal medical officer in each army corps appear to me to be excellent, and I am glad to see that steps are to be taken to simplify the returns and the forms of accounts used in hospitals.

I consider the proposed rates of pay to be adequate to attract good men if some modifications are introduced in the conditions of service, but the pay of the colonel should be substantially added to. I do not think that £1200 a year would be too much to offer to this rank, and I would point out that on the proposed scale a colonel, if not in charge of a hospital, would actually draw less than a selected lieutenant-colonel holding such a charge.

The scheme put forward is of course a mere outline and I take it that it is published with the view of obtaining the opinion of the profession on all the questions involved. I would remark that in order to be of any real service to the State the Advisory Board must have more than a power to advise—there must be some guarantee that the advice tendered will be taken. I observe that nothing is said definitely as to the very necessary increase to the number of officers required for the corps. I believe that any number less than 1250 officers will not permit of the proposed study leave—which I regard as one of the most valuable recommendations of the Commission—if sufficient ordinary leave is to be permitted to the officers for rest and relaxation. The question of pay for the junior officers in India is but indefinitely touched on. The Indian Government, which has hitherto proved almost intractable, must be bound by a clearly-worded warrant as to the scale of Indian pay, which must include a proper rate of charge-pay for those officers who have the great responsibility of the charge of hospitals. I am glad to see that every army corps is to have a completely equipped bearer-company and field hospital and a proportion of other medical field units at its headquarters, for without such a provision it is impossible for the officers and men of the Royal Army Medical Corps to gain practical experience in the performance of field duties. I hope that a scheme which contains so much that is good will not be wrecked by the want of a real knowledge of the feelings of the profession, but I am fairly confident that the proposals, unless modified, will not bring forward either the kind or the number of competitors required.

I am, Sirs, yours faithfully,

Oct. 15th, 1901. A WELL-INFORMED OBSERVER.

To the Editors of THE LANCET.

SIRS,—Your various correspondents seem to have confined their criticisms of the recommendations of organisation to the Advisory Board, the examinations, and such like things, whilst its pecuniary aspect appears to have been almost entirely passed over, it being taken for granted that a very substantial increase of pay is offered. I think, Sirs, I can show you that so far from this being the case the state of the corps will be much worse. For any man to enter the Royal Army Medical Corps merely for the sake of the annual pay would, of course, be absurd. The inducement lay in the pension, given after a certain number of years' (20) service. Was this not given no man in his senses, unless he was an utter failure, would think of joining. This inducement is now done away with, as after 18 years' service he can be compulsorily retired with a gratuity of only £2500. It is very true that the new scheme says that he is given his choice of remaining if he passes a certain examination, but we all know what this means. A word from the Treasury if economy was the order of the day and this choice would be

either withdrawn or the examination so screwed up as to be impassable, and out he would have to go *nolens volens*. I speak of what I know when I say that the chance of any average man—unless he is blessed with influence in high places—being permitted to retire on a pension is not worth a button.

I have two sons on whose medical education I have spent about £2000. They have asked my advice and I tell them: "Infinitely better run your luck in private life than join a service from which you will be kicked out when too old to start life afresh and very likely with broken health."

I am, Sirs, yours faithfully,

Clifton, Oct. 22nd, 1901. A FATHER.

P.S.—The following table shows the sum received during and after 20 years' service under the old and new scheme:—

Old Regulations.	£	s.	d.
5 years at £200 per annum	1000	0	0
5 years at £250 per annum	1250	0	0
2 years at £273 15s. per annum	547	10	0
3 years at £385 per annum	1095	0	0
5 years at £410 12s. 6d. per annum	2053	2	6
	5945	12	6
Add pension of £1 per day, capitalised	5000	0	0
	10,945	12	6

Proposed New Ones.	£	s.	d.
3 years at £250 per annum	750	0	0
4 years at £287 per annum	1148	0	0
3 years at £307 per annum	921	0	0
2 years at £385 per annum	770	0	0
3 years at £430 per annum	1290	0	0
3 years at £475 per annum	1425	0	0
	6304	0	0
Add gratuity	2500	0	0
	8804	0	0

Or a difference of £2100 in favour of the present regulations. It will be noticed that the pay alone under the new scheme is £359, or just £20 per annum more.

THE APPOINTMENT OF ASSISTANT MEDICAL OFFICER AT AN ASYLUM.

To the Editors of THE LANCET.

SIRS,—In a very few of the advertisements of vacancies for these appointments there is now being inserted a clause stipulating for annual re-election after service for a stated period of time. I should like to offer a word of caution to candidates applying under these conditions and to indicate, in the event of success, how such a clause may operate unfavourably and prejudicially. In appointments under the Metropolitan Asylums Board or in asylums where the governing body exercises a working control the danger that I fear may be non-existent, and the assistant medical officer may have a fair chance of his abilities and worth receiving recognition, but in an asylum where the medical superintendent is permitted to dictate and arrange the duties of every officer under him, and further to act as an impassable barrier between the committee and all subordinate servants of the institution, it is evident that the assistant medical officer must regard himself as totally dependent on the favours of the superintendent.

I have not personally experienced the effects of such a clause as I mention, but in the asylum in which I served for a number of years I can easily imagine the manner in which it may be used. The visiting committee never by any means became directly acquainted with the work of the officers and servants. Visitation of the wards and offices of the asylum was strictly confined to a 10 or 15 minutes' bi-monthly run (personally arranged and carefully conducted by the medical superintendent) through the male or female patients' divisions. Exceptional or occasional visits at unknown times or to entertainments, services, or special functions were never made. Not the slightest effort was ever made to ascertain or verify assigned reasons for removals or departures of members of the staff. The principles guiding the selection or appointment of subordinate officers, attendants, or nurses were beneath notice and practically every administrative and executive power was left with childlike trustfulness in the hands of the medical superintendent.

I must say in fairness that this condition of affairs had very little effect on me individually and the same may apply to the prospective assistant medical officer to whom I address myself, yet I know of the grossest injustices having arisen from this state of affairs and of which the committee were kept in blissful ignorance. In such a case, it simply amounts to this, that the subordinate must first gain the personal favour of his senior officer. Given this he may succeed; but once forfeit or lose it and no amount of ability, devotion to duty, scientific work, or anything else will benefit him one jot or tittle. He is practically as dependent on the superintendent as if he were salaried and paid by him instead of by a public body that ought to have sense enough to perceive that *sometimes* it may even be for the institution's good that subordinate officers should have at least a modified measure of independence. Any attempt at this on the part of the assistant medical officer individually would simply result in his being crushed on the first favourable opportunity, and the committee—well, the committee would swallow, quite complacently, the bolus provided. Certain superintendents wish this opportunity to occur annually.

I am, Sirs, yours faithfully,

Oct. 22nd, 1901. EX-A. M. O.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

Great Increase of Plague Mortality.—Death-rates of Madras, Bombay, and Calcutta.—Training for Sanitary Officers in Bombay.—The Sanitary Shortcomings of Madras City.

LAST week's returns merely showed a temporary suspension of the rise in plague mortality which has been going on for the past two months. This week there is a large and sudden increase from 5612 deaths to 7279. The Bombay districts return 6499 deaths, against 4844—chiefly in the Dharwar (1951), Belgaum (1290), and Satara districts—Bombay city 233, against 236; Mysore State 290, against 342; Bengal 99, against 72; Calcutta 16, against 13; Punjab 90, against 57; and the North-West Provinces 28, against 18. Benares district returned 18 deaths and Allahabad district 10. The widespread distribution of the disease is now very evident, and the increase in Bengal, the Punjab, and the North-West Provinces is very ominous.

The high death-rate of Madras has gone down, the last published figures giving it at 89 per 1000. The mortality, however, continues very high in some parts of the city. The death-rate in Bombay city is 58 per 1000, and that of Calcutta 25 per 1000. For the latter city there is a vast difference between the health of the urban area as compared with the suburbs. The latter has a death-rate of 33 per 1000, calculated on the old census figures, while the former is only 28 per 1000 by the same figures.

An important step in the direction of training sanitary officers has been taken in the Bombay Presidency. The idea is to train a class of sanitary engineers and health officers to take up posts in the Mofussil now filled by men with no special qualifications. The necessary instruction will be given at the Poona College of Science and practical work in the health and drainage departments of the Bombay municipality will be given by the health officer.

Bombay has got its improvement trust for the reconstruction and general improvement of the native parts of the city; Calcutta is waking up to its duties by dealing on an extensive scale with the remodelling of its insanitary bustees; and now it is high time that Madras should bestir itself and venture upon some general scheme of improvement. There are, for example, the dirty drains of Black Town to be got rid of. The health officer reports that "hardly any of the openings into the main drain of Black Town are trapped and the smell given off at various points from it is most offensive." Then there are the slaughter-houses—overcrowded, antiquated, and unprovided with many necessary arrangements. Again, there is little done to protect the public as regards its food supplies. The Health Department greatly wants strengthening in this direction, as immense quantities of bad meat, bad milk, and adulterated food-stuffs are sold practically without hindrance. The average death-rate of nearly 50 per 1000 is a strong indication that the sanitary requirements of the city have been neglected.

Oct. 5th.

SANITATION AT EDINBURGH.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

So important an intellectual and educational centre as Edinburgh is in honour bound to keep well to the front in all matters relating to the preservation of public health. Yet this is no easy task. Like many other ancient and historical cities, Edinburgh was once surrounded by walls. The dwellings within these fortifications were consequently cramped for room and were therefore built to a great height and close together. Many houses abut only on to closes or narrow passages, and as they are built of stone and are six or more storeys high it would be a difficult and expensive matter to cut broad thoroughfares through these dense accumulations of inhabited and lofty structures. To make matters worse, it is in this, the oldest part of the town, that the poorest classes now live. As the town extended the prosperous sections of the community built for themselves more commodious houses and thus created what are now known as the New Town and the Southern Districts. This classification has facilitated the establishment of comparisons that are useful and incidentally bear on the question of the high death-rate in the South African concentration camps. Sir Henry Littlejohn, as medical officer of health, points out in a recent report the proportion of the population attacked by measles in the various districts. Taking the last three annual reports, the average cases of measles notified during the years 1898 to 1900 inclusive were equal to 39·8 per 1000 in the New Town; to 47·7 in the Old Town; and to 30·4 in the Southern Districts. The New Town, though better than the Old Town, is composed mainly of tenements, while the Southern Districts possess a large number of villas and self-contained houses. The figures are in accord with what might be expected—namely, that there were more cases in tenement dwellings and among the poorer sections of the community. Nevertheless, the difference is not so very great, and it is in the death-rate rather than in the number of cases that the effects of poverty and inferior sanitation are rendered manifest with startling emphasis. Thus the average annual death-rate was equal for the three years to 1·96 deaths per 100 cases of measles in the New Town, 4·26 in the Old Town, and 0·46 in the New Town. Here, then, we have a repetition on a small scale of the experience of the concentration camps in South Africa—namely, that the number of deaths from measles is not due to the number of the cases but to the want of proper nursing and accommodation for the patients. It would be difficult to find in Great Britain a clearer illustration of the effects of sanitation on the results of disease. The general zymotic death-rate in 1900, excluding diarrhœa, for the whole city was very low and amounted to only 0·96, but the deaths from these diseases were equal to 1·43 per 1000 of the population of the Old Town, to 0·90 per 1000 in the New Town, and to only 0·33 per 1000 in the Southern Districts and to 0·30 in Portobello.

At Edinburgh measles was included in the compulsory notification powers obtained by that city in 1879. After 20 years' experience Sir Henry Littlejohn has come to the conclusion that in the absence of proper means for isolation such notification has been of little service. It would be more useful, he considers, to notify erysipelas and puerperal fever, as these diseases might more readily be dealt with. As matters now stand the notification of measles is mainly of service in keeping the sanitary authorities better acquainted with the health conditions of the various localities and in indicating where precautions should be taken to prevent the spread of the disease in schools. Also, some of the more severe cases have been removed from the poorest houses to the hospital, thus giving the patients a better chance of recovery. But as the majority of cases cannot be removed to isolation hospitals there is no hope of stamping-out an epidemic of measles in the same manner as, for instance, an epidemic of small-pox.

Under these circumstances it is not surprising that the city has been anxious to increase its hospital accommodation for infectious diseases. For many years this question has been before the sanitary authorities, but the energy displayed in this cause was chiefly manifested during the prevalence of epidemics and generally died out when the danger had passed. Yet so far back as 1497 the citizens of Edinburgh learnt to appreciate the usefulness of isolation. At that time there was a terrible epidemic of "grandgore," or French pox, and it was stamped out by deporting all the sick to the island of Inchkeith. Then, again, in 1513, after the battle of Flodden, there was a disastrous epidemic of bubonic plague. Wooden huts were erected on the Borough Muir for the isolation of the patients brought from Edinburgh. These huts were carefully burnt when the epidemic was over. The plague, however, broke out again in 1529, and then, for the first time, notification was enforced. The means of compulsion contrast forcibly with the small fines imposed in the present day; for anyone who failed to report a case of sickness was burnt on the cheek and banished from the city. Vagrants were closely watched, strangers entering the city were registered, and persons attending to the sick were threatened with pain of death if they associated with other people. Thus the principle that each citizen is responsible for his neighbour's health and life was fully established. Whether death was produced by the use of the assassin's knife or by the spreading of a fatal disease it was equally looked upon as murder; and in 1530 a man was hanged for going to church when his wife was suffering from plague and a woman was executed by drowning because, having the plague, she concealed the fact.

When yet another outbreak of plague occurred, in 1568–69, the authorities went a step farther. They not only isolated the sick but their families were removed to houses especially prepared for that purpose at the Muir and were there kept under observation, while their furniture was either burnt or thoroughly cleaned. This quarantine of "suspects" was maintained for 20 days. During the prevalence of plague in 1585 a system of scavenging was set up for the whole town, and the men who were employed were provided with a special uniform so that they should not soil their own clothes. This precaution has been revived in our day, and disinfectors generally wear overalls which are passed through the stove with the other objects that have to be purified. During the plague of 1645 the first approach to the appointment of a medical officer of health was made when Dr. John Paulit was engaged by the town and paid £80 (Scots) per month to attend to the cases of plague. This seems to have been the last stroke necessary to kill the foe; for from that time henceforth the plague has never reappeared in Edinburgh. It is a pity that the post of medical officer was not maintained after the cessation of this epidemic and only re-established 200 years later. Cases of leprosy were also strictly isolated and a gibbet was kept close to the lepers' house ready to hang those who came beyond the bounds in which they were confined. But in regard to the more ordinary forms of epidemic disease no such energy was shown; indeed, about 100 years ago Edinburgh was reputed to be one of the filthiest towns in the United Kingdom. Many well-known authors have denounced the revolting conditions in which even the more respectable inhabitants of Edinburgh were content to live. Nor was there any great improvement when the New Town was built, for the sanitary condition of the best new houses was most defective. One measure, however, was adopted—namely, the free vaccination of children—and this as far back as the year 1815. Some good was also accomplished by a big fire which destroyed many fever dens on the south side of the High-street, and a street-cleansing department was established by the corporation at about this time. The cesspools, the drains, and the sewers, however, were not touched, and when the cholera appeared in 1832 it spread most disastrously throughout Edinburgh. There were also many epidemics of typhus fever. On these occasions temporary sheds were erected for the patients in the grounds of the Royal Infirmary, but it was difficult to find anyone courageous enough to remove the patients from their houses to these sheds. It often happened that medical men had themselves to do this work and many of them lost their lives through contracting typhus fever from their patients.

It was in 1863 that the town council first appointed a medical officer of health and they selected the surgeon of the police, Dr. (now Sir Henry) Littlejohn, to fill that office. His first work was to make a sanitary survey of the city and to draw up health statistics for each district, thus demonstrating which were the worst and the most dangerous localities. This he supplemented by details as to density of population, air-space in the dwellings, cleanliness, &c. Then he denounced the condition of the drains, the bad sanitation of the better-class houses, the

frequent sale of diseased meat, the evil condition of the cemeteries, and many other obvious defects. This caused a great outcry, and it might have gone badly with Sir Henry Littlejohn if he had not been ably seconded by Dr. William Chambers who, most fortunately, was at that time Lord Provost. He later drew up an improvement scheme which is known as Dr. Chambers's Act, and new streets were opened out in the worst parts of the Old Town. Subsequently another leading sanitary reformer and medical man, Sir J. A. Russell, became Lord Provost, and in 1893 a second improvement scheme was passed. Meat-markets, dairies, bakeries, &c., are now inspected, and in all other respects Edinburgh is on a level with the best-administered towns of the kingdom. The result has been the saving of from 3000 to 4000 lives per annum. But the provision for the isolation of infectious cases was neglected till 1885, when the managers of the Royal Infirmary notified the town council that they could no longer provide for fever patients out of the funds of their charity. At this time the infirmary was about to remove to new hospital buildings at Lauriston, so the town council took over the old infirmary and converted it into a municipal fever hospital. Needless to say that this ancient structure is in no wise suited for the purpose and therefore considerable alterations had to be made. The fever hospital soon became quite popular and even wealthy citizens were glad to avail themselves of it rather than to keep fever cases in their private houses. An annual outlay of £4000 for the fever hospital had been allotted in 1885, but the expense had increased to four times that amount in 1893. It was then proposed to enlarge the fever hospital at the cost of £20,000; but the town council thought that they were spending quite enough money already and did not meet the proposal with favour. The very next year, however, the needed stimulant was provided in the shape of a small-pox epidemic. Huts had to be built for the patients in Queen's Park. They were an eyesore and a danger to the neighbourhood and a clamour arose. This served to educate and to ripen public opinion, so that now a magnificent fever hospital is in course of construction on a scale which seems quite regardless of expense.

Strange to say, however, that, in spite of the recent and wide extension of the city boundaries, the new isolation hospital is situated outside Edinburgh. It is stated that the House of Lords would not allow the site to be included within the city because the Lords wanted the county to make what profit it could from the outlay incurred by the town. The site consists of a farm of 130 acres on Colinton Mains. Forty acres were set aside for the hospital, which is to accommodate 600 patients; so there will be 15 patients to the acre, while at the old fever hospital there were 100 patients to the acre. All that appertains to the management of the hospital is situated in the centre; and on both sides, east and west, there are double rows of pavilion wards. All those on the east will be devoted to scarlet fever. To the north-west there are three pavilions, one each for diphtheria, typhoid fever, and erysipelas respectively; and on the south-west there are four pavilions for measles, chicken-pox, whooping-cough, and typhus fever. The reception and observation wards are near the principal entrance. Then there are an ambulance station, lecture-rooms, a pathological laboratory, a museum, and mortuary buildings; while in another part of the grounds there are the laundry, the boiler-house, the disinfecting station, the electrical power, and incinerator buildings. Ample open space remains for recreation-grounds. The amount of accommodation varies according to the diseases; thus there will be 10 beds for patients suffering from typhus fever and 329 for scarlet-fever patients. The cubic air-space for the scarlet-fever patients will amount to 2000 feet each, but for whooping-cough and chicken-pox the cubic space will be 1690 cubic feet per bed, the patients in these cases being nearly always little children. In the diphtheria wards 2545 cubic feet and in the typhoid fever wards 2514 cubic feet have been allowed, while in the case of typhus fever this has been increased to 3042 cubic feet for each patient. The pavilions run north to south with the ward offices to the north, so that the shadow of their greater bulk does not fall upon the wards, and they thus receive the maximum of sunshine. Each ward has two small separate rooms, one holding one bed and the other two beds, and of course there is a bath-room, and a duty-room, &c.

The ground is from 370 to 400 feet above the sea level and it dominates a gentle southern slope. It is well away from all buildings and the sun's light falls full on the hospital without interruption. The spaces between the various pavilions will never be less than 80 feet, and as none of the blocks are more than two storeys high there cannot be any overshadowing. The stones employed are of a light-red colour and this gives a warmer appearance than the grey stone generally used at Edinburgh. In the wards great efforts have been made to introduce the most recent improvements. The floors are of solid teak planks, closely jointed, embedded in prepared pitch, and impregnated with paraffin wax. The walls are covered with Keene's or Parian cement and the angles are rounded off. Steam coils will be employed both for ventilating purposes and for heating, and, of course, by the windows that face each other a through draught can be established. The water-closets, the slop-sinks, the ventilated bed-pan cupboard, and the shoot for dirty linen, instead of being situated, as is generally the case, at the end of the ward, are built out from the centre of the ward; therefore it will not be necessary to pass before them in going in and out to see the patients. Electric light will be used throughout the buildings, and gas will be employed for ordinary cooking purposes. For drainage the separate system has been adopted. The roof and subsoil water will be discharged into the Braid Burn by a 20-inch pipe with a fall of 1 in 150. For the sewage the pipes are of heavy cast-iron, coated inside and outside with Smith's patent solution, laid on a gradient of 1 in 73, and they will measure nine inches in diameter. The lateral branches will be smaller and have a gradient of at least 1 in 40. Each pavilion has a separate connexion and ventilating trap, and there will be another ventilating shaft at the summit of each section of branch drains. All baths, sinks, &c., have disconnecting traps. The small-pox pavilion has a separate drain that goes straight to the outfall and does not mix with the rest of the system. Numerous automatic flush-tanks will be employed and a powerful disinfectant will be mixed with the water which they contain.

All the pavilions are connected with each other and with the administrative buildings by covered ways. Below these covered ways there is an underground passage where all pipes are laid and they are thus easily accessible. The nurses' home is a very large building four storeys high, with 130 separate bedrooms, some spare rooms, two sick-rooms, three day-rooms, a library, a recreation room large enough for concerts and other entertainments, and large outdoor recreation grounds. Then there is a separate block comprising the stores, the kitchen, the offices, and the dining-rooms. These latter are so divided as to separate the scarlet-fever nurses from the other nurses and they have different entrances. All the principal buildings are now completed as far as the masonry is concerned, but there is still an immense amount to be done within. The fittings, the flooring, the furnishing, and the gas, the water, the electric and other services will take a long time to put in. There is, indeed, much dispute as to when the hospital will be in a fit condition to receive patients. On visiting the hospital I found that some of the pavilions were much more advanced than the others, and the nurses' home is not so far from completion. Nevertheless, the works are not sufficiently advanced to venture upon any criticisms with regard, for instance, to the system of warming and ventilation. One thing, however, I did observe—that the principle enforced on the continent in schools, hospitals, &c., that heating should be provided near to the coldest surfaces, has been adopted here. Of course, the coldest surface is that of the window-panes. Therefore the hot-water coils are placed within the hollowed-out window sills. The heated air comes out of the top travelling up against the cold window-panes. This will prevent the down draughts that are created by cold surfaces, such as windows or marble walls, and which render it so difficult to secure the same temperature in every part of a ward, hall, theatre, or other large building. What the heating of such a hospital means may be gathered from the fact that there will be 3600 feet of hot-water pipes from the five boilers. These boilers measure 30 feet by seven feet each. These 3600 feet of pipes being all outside the wards in the underground passages, the figure does not include the pipes within the buildings. It is said that the hospital will cost nearly a quarter of a million of money; and this will certainly raise the question whether the same efficiency might not have been secured with a smaller outlay. In any case, when it is remembered that in 1893 the town council hesitated to spend £20,000 to enlarge the old fever hospital, the fact that they have now

incurred such an enormous liability shows that they have made great progress in the recognition of the principle that in matters relating to public health what appears to be economy is but the worst form of extravagance.

(To be continued.)

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

"Pearl Ash" Poisoning.

THE city coroner on Oct. 17th concluded the inquest on the body of a man named Brocklehurst, of Hayfield, who was said to have died from the effects of taking "pearl ash" instead of "potash." The deceased received a prescription from another man named Broadhurst who was, as many of the working classes are, somewhat of an amateur doctor, the terms of which were as follows:—"For sciatica or rheumatism: Take two table-spoonfuls of pearl ash to one pint of water. Boil and add the pearl ash, then let cool and bottle. Take one wineglassful night and morning." The druggist's assistant said that he did not remember serving pearl ash. "When asked for pearl ash he would dispense carbonate of potash," as the former had a strong caustic action. The son of the deceased, a boy, aged 12 years, said that his mother sent him for a pennyworth of pearl ash about two months ago, and he was served with "some dark-coloured substance like a stone." It is not clear how much of the solution was taken. After some time the man was removed to the Manchester Infirmary, where he was only able to take liquid food, and he gradually sank, dying on Oct. 9th. The coroner told the jury that "if a person totally ignorant of medicine took upon himself to administer dangerous remedies he was amenable to the law," and if they thought that the person who was alleged to have given the prescription had in giving it been guilty of "gross ignorance and scandalous inattention" they must send him for trial on the charge of manslaughter. The jury took a merciful view of the matter and were of opinion that the man who gave the prescription showed gross ignorance but not malicious intention, as he had acted in a kindly spirit. Their verdict was "that Brocklehurst had died from starvation caused by his taking an irritant poison prescribed by Broadhurst, who had been ignorant of its action." The coroner said that he thought the case ought to be investigated by the police and magistrates of Derbyshire. The inspector said that he would report it to his superior. This case is a good illustration of the ignorance as to the most ordinary things prevalent among our imperfectly educated people, and it is to be feared that little is done to disperse it by the present-day elementary teaching.

The Leech Memorial Fund.

It is proposed in a short time to close the fund now being raised to found a memorial to the late Professor D. J. Leech. It now amounts to £1230, and the committee will be glad for any further contributions to be forwarded to the honorary secretary, Dr. E. M. Brockbank, 3, St. Peter's-square, Manchester.

Manchester Schools for the Deaf and Dumb.

The committee of the Royal Schools for the Deaf and Dumb, Old Trafford, are appealing for increased support. It is now recognised that deaf children must receive a higher education than was formerly required "to enable them to compete in the labour market with persons not so afflicted," and thus the cost of their education has been increased. In 1881 there were 157 pupils and the cost per head was £20 11*s.* 9*d.* In 1891 there were 190 pupils at a cost of £27 2*s.* 7*d.* per head, and now, in 1901, there are 200 pupils and the cost per head has gone up to £34 19*s.* 5*d.* The school premises have had to be enlarged, and while 20 years ago there were about half-a-dozen teachers—some of whom were deaf—at small salaries, it seems that the educational needs require now 24 teachers, who, to comply with the demands of the Education Department and to teach efficiently on the oral system, must have had special training. The controversy as to the Blind Asylum still goes on, and the committee of the Deaf and Dumb Schools are anxious to let it be known that "the two institutions are in every respect distinct and separate, and that the two governing bodies have nothing in common beyond the spirit of philanthropy which guides their actions." There is a debt to the bankers of £7754 on building extension account, to which must be added about £1123 for completing work now in hand. A small sanatorium for the isolation of sick children is much needed, but the committee are reluctant to build while they are burdened with their present debt. Assuming that the institution is managed financially with judgment and economy, a good case is made out for asking "the community of which Manchester is the centre" for increased help. The idea that these schools are affiliated with the Blind Asylum has no doubt arisen from the fact that "the two charities adjoin each other and are under one continuous roof."

Scarlet Fever.

Scarlet fever has for some time been rather prevalent in Manchester, and in the Moss Side district the cases are very numerous. Dr. S. H. Owen, the medical officer of health, stated at the meeting of the district council that "he had reason to believe that scarlet fever patients had not been reported, either from great carelessness or ignorance of the infectious character of the disease." There is no doubt that in many mild cases no medical man is sent for and no notification is made.

Oct. 23rd.

WALES AND WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

Intemperance and Insanitary Dwellings.

THE chairman of the Glamorganshire Quarter Sessions which were held at Swansea on Oct. 15th dwelt at some length upon the great increase in the number of indictable offences in the county. He said that drunkenness was on the increase to such an extent that unless something very drastic took place they would be having such a state of things that they would never be able to hold up their heads among the inhabitants of other counties not only of Wales but of England. No particular remedy was suggested, though the provision of rational forms of amusement was spoken of with favour. To those who live in the densely populated districts of South Wales there can be no doubt that the insanitary conditions of many of the working-class dwellings account to a large extent for the drinking propensities of the inhabitants. The responsibility for the existence of these conditions rests primarily with the sanitary authorities, but the Local Government Board, though aware, through the reports of the medical officers of health, of the state of most of the districts, has dealt very tenderly with the shortcomings of the authorities. One instance may be given. In the year 1895 Dr. R. Deane Sweeting reported to the Local Government Board upon the insanitary condition of the Amman valley district in Carmarthenshire, and made certain suggestions as to the improvements necessary, but when Dr. S. W. Wheaton visited the district in the spring of this year he found that little or nothing had been done in the direction of carrying out Dr. Sweeting's suggestions, and that there was still no proper system of drainage or of scavenging, that no means were taken to prevent the spread of infectious disease, and that there was no systematic inspection of the district for the discovery of nuisances.

The Prevention of Consumption.

Upon the advice of the medical officer of health (Mr. E. Davies) the Health Committee of the Swansea Corporation has decided to invite the voluntary notification of phthisis from the medical practitioners in the town and to pay a fee of 2*s.* 6*d.* for each notification certificate received.—At the first meeting of the South Wales and Monmouthshire Branch of the National Association for the Prevention of Tuberculosis it was decided that the principle of subdivision should be adopted and that sub-branches should be formed. Circulars are to be sent by the committee to county and district councils emphasising the necessity for establishing sanatoria. Dr. C. T. Vachell expressed the opinion that an institution supported solely by voluntary contributions would not be likely to succeed.—The Bath Board of Guardians at a recent meeting discussed the treatment of consumptive pauper patients, and eventually decided to wait and see what the Bristol Board of Guardians would do in the matter of treatment of these cases. At the meeting of the guardians held on Oct. 16th the medical officer urged the guardians to act promptly and to provide proper accommodation for the treatment of phthisical cases.

The Bristol Guardians had suggested that the Bath Board of Guardians and themselves might jointly provide an institution for the treatment of these patients. Eventually it was decided to appoint a sub-committee to confer with the Bristol Guardians.

Insanitary Dwellings in Cardiff.

The two most prominent public health questions at the present time are the housing of the working-classes and the prevention of tuberculosis, and they are questions which admittedly have a very close connexion. Nearly all the speakers at the recent Cardiff conference on tuberculosis emphasised the importance of providing dwelling-houses with a sufficiency of air-space and sunlight and with absolute freedom from damp surroundings. It is a little disheartening, therefore, to find that when steps are taken by the Cardiff Corporation to improve the dwellings of the poor, not only, as might be expected, does opposition come from the property owners, but that these are supported in their opposition by members of the medical profession. In January last the medical officer of health (Dr. E. Walford) presented a report to the corporation upon the courts and unhealthy dwellings in the town, and although there are practically no slums in the borough he was able to refer specifically to 134 houses in various parts which he considered should be dealt with, not as insanitary areas under Part I. of the Housing of the Working Classes Act, 1890, but separately under Part II. of the Act. Proceedings were taken on Oct. 17th before the deputy stipendiary magistrate with respect to six houses which, according to Dr. Walford's report, were provided, in common with five adjacent houses, with only a single water-tap and with only two water-closets, each defective in construction and without any water-supply for flushing, and in which most of the rooms were dark and damp—those on the ground floor being paved with stone and being without back doors or back windows and without floor ventilation. The houses generally were described as being old, in a bad state of repair, and much shut in by high buildings surrounding them on all sides and obstructing light and ventilation. Dr. Walford asked that these houses should no longer be occupied. Three local medical practitioners stated that in their opinion they were not unfit for human habitation and that their occupation would not be dangerous to health. The deputy stipendiary, after asking Dr. Walford if he was aware that in Leeds almost all the cottage houses are built upon the "back-to-back" principle, remarked that Leeds was not an unhealthy town and he subsequently refused to make an order to close the houses in question. The danger which lies in a little knowledge is thus once more illustrated, for if the magistrate will pursue his inquiries a little further he will find that not only has Leeds a high death-rate from all causes, a high zymotic death-rate, and a high infantile mortality-rate, but he will also learn that it has been conclusively shown in other parts of Yorkshire by comparisons extending over a series of years that the death-rate among the occupants of "back-to-back" houses is considerably higher than among those who live in "through" houses, although the conditions of the two classes of dwellings as regards age, construction, class of occupant, sanitary conveniences, &c., are precisely similar. If the deputy stipendiary magistrate desires to raise the death-rate in Cardiff which last year was 16·5 per 1000, to that of Leeds which was 20·2 per 1000, he will continue to refuse the applications of the medical officer of health, but the responsibility must be his and not Dr. Walford's.

Brentry Inebriates' Home.

The Swansea Corporation has decided to contribute the sum of £1000 to the board of management of the Brentry Home, thereby securing a share in the management and seven beds for Swansea patients during the next 25 years. The chief constable has stated that there are now in Swansea 13 persons eligible for admission to the home. The corporation of Bath has entered into an agreement to secure three beds in the home during the next six years upon payment of £27 7*s.* 6*d.* annually.

Employment of District Nurses by Sanitary Authorities.

There is no provision for isolating cases of infectious disease in Ebbw Vale, a colliery district in Monmouthshire with a population of 21,000 persons. Owing to severe outbreaks of diphtheria and typhoid fever the district council recently engaged two district nurses, but the Local Government Board now state that there is no legal authority empowering the council to pay nurses for attending patients at their own homes.

Hereford County Asylum.

Extensive additions to the Hereford Asylum were formally opened on Oct. 15th. They consist of new quarters for the assistant medical officer and for the matron, a one-storey block to accommodate 50 male patients, and a two-storey block for 100 female patients. The dining-hall and the chapel have been enlarged and the laundry accommodation has been increased. The new buildings like the old are ventilated and warmed on the "Plenum" system. The cost of the extensions is about £40,000. The asylum was erected in the year 1871 on a site of 10 acres, with 100 acres of garden and farm lands, at a cost of £67,000, with accommodation for 187 men and 213 women. At the present time, therefore, 550 patients can be accommodated. The institution serves the city of Hereford and the county of Herefordshire with a total population of 114,000 persons.

Plymouth Royal Eye Infirmary.

This new building, although occupied by patients for the past 12 months, has not been formally opened, the ceremony being postponed owing to the death of Queen Victoria. It has now been arranged for the formal opening to be performed by the Countess of Morley on Oct. 30th. The cost of the institution, including furnishing, has been £12,000, and the committee make an urgent appeal to the public for more subscriptions.

Oct. 22nd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Death of Dr. Foulis of Edinburgh.

By the death of Dr. James Foulis on Oct. 14th Edinburgh has lost one of its leading and most successful practitioners. He was a native of New South Wales, his father having been a medical man in Sydney. He was born in 1846 and he graduated at the University of Edinburgh in 1874. He was a thesis gold medalist of the University. He succeeded Dr. George Keith in practice and rapidly became a busy family practitioner. He took a keen interest in some biological questions and did important work on diseases of the ovary. Of late years he took a very active interest in the question of the transmission of infectious diseases by means of milk, and his voice and pen were used to enforce his views upon the profession and the public. He was a man of distinct intellectual capacity; he had the gift of ready and effective speech; he formed strong opinions which he did not fear to express, and he had a faculty of imitation which sometimes gave a humorous effect to some of his communications. He was altogether a unique personality in the profession in Edinburgh, and although he was neither a teacher nor a hospital physician no man in Edinburgh was looked upon with greater interest by his brethren, and his patients were devoted to him. He died of cardiac disease aggravated by an attack of influenza last spring.

Direct Representation on the General Medical Council.

Dr. W. Bruce of Dingwall intimated some time ago that he would seek re-election as the Direct Representative for Scotland on the General Medical Council. It has just been announced that he is to be opposed by Dr. Norman Walker of Edinburgh. It will be remembered that when Dr. Bruce was elected he won the seat over Dr. Sinclair of Dundee. The idea prevalent at that time was that no teacher need stand, as the general practitioners had decided to have one of their own body to represent them. It was thought that all persons connected with universities or corporations had the interests of those bodies more at heart than the interests of the general practitioners, and that the wrongs, either real or imaginary, of practitioners would have a better chance of being rectified by the voice of a general practitioner than of anyone else. I have no means of knowing whether the profession in Scotland is satisfied with its present representative, but a contest has at least the advantage of stirring up the stagnant pool of professional apathy. So far as Scotland is concerned it does not seem that there are any burning questions agitating the mind of the general practitioner at present, and he, of course, holds the voting power.

General Council of the University of Edinburgh.

The half-yearly meeting of this body is to be held on Friday, Oct. 25th. Motions dealing with the reorganisation of the medical curriculum and the time spent by professors in teaching their practical classes have been given notice of

and a report on the Carnegie Trust will be submitted. The meeting promises to be a lively one.

Glasgow University.

The winter session of this University was opened on Oct. 17th. Following the custom of recent years there was no formal introductory address, but several of the professors opened their respective classes with lectures on special subjects. Not unnaturally the Carnegie foundation and its probable influence upon education in Scotland came in for much acknowledgment and comment. It is, perhaps, noteworthy that one of the more recently appointed professors proclaimed his belief that the most urgent want of the Scottish universities was freedom from the compulsory ordinances enacted by the recently defunct Universities Commission.—The movement in favour of the better endowment of the University has been officially brought before the corporation, and it is reported that the Finance Committee has agreed to recommend the town council to make a grant of £5000 to the University fund. It is understood that if this is done the money will be "earmarked" to aid in the foundation of a lectureship in political or social philosophy.—The University Court will shortly appoint additional examiners in chemistry, zoology, materia medica and therapeutics, medicine and clinical medicine, and surgery and clinical surgery. The appointment in each case will be for three years from Jan. 1st, 1902, and applications must be lodged on or before Dec. 3rd next.

Glasgow Extra-mural Schools.

The winter session at Anderson's College Medical School was opened on Oct. 17th with an address by Dr. George A. Gibson of Edinburgh. In his introductory remarks Dr. Gibson spoke in commendation of the maintenance of freedom in teaching, which had led to the great development of medical education both in Edinburgh and in Glasgow. He recalled the fact that the medical school of Anderson's College had just completed the first 100 years of its existence and quoted the names of many famous men who had been students in the college. Afterwards he spoke on the importance of scientific study in medicine.—At St. Mungo's College the introductory address was delivered by Professor Malcolm Laurie who dealt with the position of the natural sciences in the medical curriculum. In so doing he criticised adversely the recent action of the English Colleges, which he condemned as reactionary and hurtful to the interests of medical education. The scientific subjects, he considered, could not be efficiently taught in schools, nor could the student do justice to them while occupied in studying for the preliminary examination. He insisted on the importance of an adequate scientific training in order that medicine might retain its position as a learned profession.—The increased interest in post-graduation study is manifested by the facilities which are now being offered to practitioners at several of the Glasgow medical schools. At the Eye Infirmary the surgeons are to give a joint course on refraction and the use of the ophthalmoscope. A similar series of demonstrations is announced at the Ophthalmic Institution, and at the Royal Infirmary classes in practical pathology and bacteriology are to be conducted. In all these cases the courses are free to qualified practitioners.

Glasgow Southern Medical Society.

The annual dinner of this society was held on Oct. 18th, under the presidency of Dr. John Stewart. There was a large attendance of members and guests, including Professor McCall Anderson, Dr. Bruce of Dingwall, Professor Stockman, and Professor Glaister. The toasts included "The General Medical Council," in proposing which Dr. Charles E. Robertson criticised adversely the refusal of the Council in June last to receive a deputation representing Scottish practitioners. In reply Dr. Bruce expressed the opinion that the Council is too large, and advocated a change in its constitution so as to make one-half of its members Direct Representatives of the profession.

St. Andrews University.

Dr. James Musgrove, at a meeting of the Senate on Oct. 16th, was formally introduced to the chair of anatomy recently founded by the late Marquis of Bute. The installation of Lord Balfour of Burleigh as Chancellor of the University is to take place on Oct. 24th. At the ceremony the degree of LL.D. is to be conferred on Lord Balfour, Sir Henry Craik, and Sir George Reid. Mr. Andrew Carnegie, LL.D., has in response to the students' invitation, intimated his willingness to stand as a candidate for the Lord Rectorship of the University.

Oct. 22nd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Health of Belfast.

AT a meeting of the Public Health Committee of Belfast held on Oct. 17th, it was stated that the number of cases of typhoid fever notified during the week showed a considerable diminution. Apparently the epidemic has gradually worn itself out. In reference to the attempts to find out the causes of the occurrence of this fever in Belfast, in addition to inquiries made by the health department it has been decided to have bacteriological examinations of the soil made in certain cases, in order to prove or to disprove the allegations frequently put forward as to the filled-in ground on which some houses are built or the saturation of the soil by sewage from improperly constructed drains being responsible.

Armagh Sewerage Scheme.

The engineer of the new Armagh Sewerage Scheme has signed an undertaking prepared by the solicitor of the council agreeing to pay the council all money that they may pay for damages, costs, and expenses, in settlement of any actions, or of sums that they may be compelled to pay by order of the judges owing to flooding caused to certain houses, inasmuch as the engineer had "caused to be substituted an 18-inch pipe for a 24-inch pipe from the courthouse to the railway culvert contrary to the plans thereof and without authority from the urban council or Local Government Board, and failed to have constructed storm overflows as shown in the plans."

North of Ireland Branch of the British Medical Association.

The autumn meeting was held in the Museum, Belfast, on Oct. 17th. After the reading of the minutes and the Council's report Professor J. W. Byers, the outgoing president, delivered a short address thanking the members for the courtesy and kindness shown by them to him during his year of office and introducing his successor, Dr. J. S. Darling of Lurgan. On the new president taking the chair, on the motion of Mr. G. L. St. George (Lisburn), seconded by Dr. J. C. Martin (Portrush), a very hearty vote of thanks was given to Professor Byers for his management of the affairs of the branch during the past year. The new president then delivered his inaugural address on the Danger of Delay in Operation in Surgical Affections, for which he was cordially thanked. Mr. T. H. Brownrigg (Moira) then read a paper on Notes of a Case of Typhoid Fever with Hyperpyrexia and of a case of Non-febrile Typhoid Fever. In the discussion which followed Dr. Martin, Professor J. A. Lindsay, Dr. J. Robb, Professor Byers, Dr. W. Calwell, and the President took part. In the absence through illness of Dr. J. C Rankin the secretary read a paper by him on Four Cases of Enlarged Spleen. A discussion followed.

Remuneration of Locum-tenents of Dispensary Medical Officers by Boards of Guardians.

The question of the remuneration of substitutes for dispensary medical officers has again arisen. It would appear that the Ballymoney Guardians had fixed the scale of remuneration for locum tenents at two guineas per week. Dr. J. Wallace refused to accept this sum, stating that he could not procure a substitute at such a figure. Subsequently Dr. Wallace being temporarily unable to work owing to sickness, notified the relieving officer, and he appointed Dr. M. J. O'Kane of Ballymoney as substitute, who claims six guineas for the two weeks' work. The guardians have requested the Local Government Board to hold an inquiry into the whole matter.

Deaths of Medical Men.

On Oct. 16th a well-known and respected Ulster practitioner, Dr. R. B. McClelland, died from apoplexy at his residence, Banbridge, co. Down. Dr. McClelland, who was the son of a medical man, graduated M.D. of Glasgow in 1849. He practised all his life at Banbridge, where he was much respected. He was a J.P. of co. Down. His funeral, which was largely attended, took place on Oct. 19th. On Oct. 18th Dr. Hugh Fisher, one of the younger Belfast medical men, died from heart failure after a severe attack of typhoid fever. He was only 31 years of age. He studied at Queen's College and graduated in 1893 in the Royal University of Ireland. Dr. Fisher was greatly respected by his fellow practitioners and by his patients. He married Dr. Elizabeth G. Bell, and she and an only son, two years of age, survive to deplore his early decease.

The Medical Profession and University Education in Ireland.

The President of Queen's College, Galway, has written a letter to the press, in which he says that Dr. W. A. McKeown asserts[1] that Galway College has had only 16 medical graduates in 10 years. The President states that the number of medical graduates in the Royal University alone in 10 years (1891–1900) was 42. In addition to these five other students obtained further medical qualifications in the same university. Dr. McKeown, in reply, says that the number 16 represents the total number of students educated at Galway College alone for the final examination in medicine in the Royal University. The mistake as between 16 and 42 has arisen, Dr. McKeown thinks, because the President must have counted students who have passed their early medical studies in Galway College, but who have gone to other colleges for their final studies, as if they remained all the time at Galway. It is the difficulty in the study of the clinical side of medicine, surgery, &c., which causes students of the medical faculty to leave Galway in the later years of their curriculum.

Oct. 23rd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Hospital Medical Officers and the New Law concerning Accidents.

I HAVE on previous occasions referred to the new law concerning accidents to workmen sustained in the course of their occupation. This law provides that employers shall be responsible for all medical care and for drugs supplied to any workman who has met with an injury in the course of his work. Both ordinary general practitioners and hospital physicians and surgeons protested against this law. Employers naturally pay less than if the workman were treated at home, and also with a view to his getting the best treatment they send him off to the nearest hospital. In this manner the general practitioner is deprived of many fees which would have fallen to his lot and hospital physicians and surgeons lose also, for they have to treat gratuitously many people whose cases would have been a source of profit, for the bill would have been discharged by the employer. A medical man at Clermont-Ferrand, by name Dr. Bousquet, has taken the initiative and has summoned his colleagues to a meeting to be held on the eve of the Congress of Surgery for the purpose of considering what measures can be taken to lay before the congress the just demands of medical men.

Methods for the Suppression of Small-pox Inoculation.

At the meeting of the Academy of Medicine held on Oct. 8th M. Hervieux read a paper upon Small-pox Inoculation and Native Inoculators. Despite the incessant efforts of military surgeons and colonial medical officers small-pox yearly claims a certain number of victims in the colonies, being brought about and spread by the practice of inoculation. In M. Hervieux's opinion the best way of combating this evil is to try to raise up a race of native vaccinators and so to convert the natives to a belief in vaccination. This opinion, said M. Hervieux, is held very strongly by Dr. Le Gros, colonial medical officer of Kabylia. Not only would this plan provide for a great increase in the number of orthodox vaccinators, who are far too few in the countries specially concerned, but it would also get over religious scruples, for the vaccinator would be of a like faith with the vaccinated. M. Hervieux referred to other plans which have been put forward, but the one which I have mentioned seemed to him to be the most efficacious.

Suicide in France.

The number of suicides for the year 1898 showed a slight increase—namely 9438, as against 9356 in 1897, or an increase of 82. The figures for a period of five years before and including 1898 were as follows:—1894, 9703; 1895, 9263; 1896, 9260; 1897, 9356; and 1898, 9438. It seems fair to conclude from these figures that the diminution which began in 1895 was the commencement of a real diminution and not merely of a temporary one. The department of the Seine supplied one-sixth of the total number of suicides in 1898—namely 1566, or 64 less than in 1897. Of the persons committing suicide 85 were under 16 years of age, 477 were between 16 and 21 years of age, 1436 were between 21 and 30 years of age, 1285 were between 30 and 40 years of age, 1669 were between 40 and 50 years of age, 1852 were between 50 and 60 years of age, 2356 were more than 60 years of age and the ages of 278 were unknown. The civil condition of those committing suicide was ascertained only in 8899 cases. The unmarried numbered 3008, the married with children 2502, the married without children 1422, widows with children 1113, and widows without children 834. As to employment, 2436 cases occurred among agriculturists, 1668 among those employed in various industries, 1282 among business men and merchants, 1380 among those carrying on a profession, 1511 among domestic servants, and 1181 among those not in employment or whose employment could not be ascertained. As to motive, 1537 suicides were set down to poverty and reverses of fortune, 943 to family troubles, 624 to love or jealousy, 1226 to drink, 2705 to various troubles (of which physical pain accounted for 1785), 1347 to cerebral disease, and in 1056 cases the cause remained unknown.

[1] THE LANCET, Oct. 12th, 1901, p. 1012.

High Frequency Currents in the Treatment of Anal and Vulvar Pruritus.

At the meeting of the Therapeutical Society held on Oct. 9th M. Leredde reminded the society that physical agents, like other methods of treatment, had their limitations from a therapeutical point of view. M. Leredde had especially remarked this in using high frequency currents for pruritus. If, however, this method were used for the treatment of pruritus limited to the anus and vulva excellent results might be obtained. He cited the cases of four patients suffering from anal or vulvar pruritus and in whom the disease had lasted from three to 12 years and had resisted all ordinary methods of treatment. One patient had suffered also from general pruritus which had yielded to dietetic treatment but the anal pruritus had persisted. After from six to 13 sittings, which took place two or three times a week and the duration of which eventually lasted for 15 minutes, all the patients were completely cured.

The French Congress of Surgery.

On Oct 21st the Fourteenth Congress of the French Surgical Association was held in the large theatre of the Academy of Medicine. M. Lucas-Championnière was in the chair and was supported by Professor Jacques Reverdin of Geneva as vice-president, and by Dr. Brouardel (dean of the Faculty of Medicine), Dr. Bouchard, Dr. Guyon, Dr. Dieu (chief of the Army Medical Department), and Dr. Auffret (chief of the Naval Medical Service). In his opening address the President discoursed upon recent improvements in surgery and warmly eulogised the practice of antisepsis in which he firmly believed, despite the statements of the modern champions of asepsis, so that he frankly owned that he would like to see a return to the original doctrine of Lister. Dr. Guinard, the joint general secretary, who spoke in place of Dr. Picqué, gave a welcome to the foreign guests, of whom there were many, and the proceedings commenced by a discussion upon the surgery of the spleen. In the evening the President entertained some 200 members of the Congress at dinner.

Oct. 22nd.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Granting of Degrees to Foreign Graduates by the Italian Universities.

FOREIGN practitioners resident in Italy who are rendered uneasy by the repeated attempts lately made to restrict the privileges accorded to them by the present laws must all have felt a sense of their helplessness in face of the difficulty in which they would have found themselves had these attempts proved successful. Perhaps the British medical men have less to fear from this source than have those of any other nationality, seeing that the danger to them has been, in part at least, met by the application of Part II. of the Medical Act of Great Britain to Italy and the consequent removal of the bar which previously existed to reciprocity of medical practice between the respective countries. But in the case of American, German, Austrian, Swiss, and other foreign medical men a similar expedient is not available since none of these countries are prepared to act towards Italy in this matter with the liberality shown by Great Britain. It is natural therefore that these men, even more than their British colleagues, should look wistfully for some means of

escape from the dilemma in which they would certainly be placed in case of any legislative changes of the kind recently contemplated. Such a means does in fact exist, although as yet it has not been taken advantage of to any extent. I refer, of course, to the obtaining of an Italian degree in medicine, which places its holder in a position of security from which no possible changes of the law can dislodge him. In almost every other country it is now impossible, without a prolonged course of study and the passing of many examinations, for a foreign graduate to obtain the diploma in medicine of any university of repute. But in Italy the case is quite different, for in virtue of old-time regulations made for circumstances now entirely changed the law not only permits, but obliges, the various universities to admit to the examination of "laurea"—which corresponds to the final examination for the M.D. degree of certain British universities—any medical graduate of a foreign university whose degree may be considered by the Superior Council of Education as equal in value to that of the Italian university whose "laurea" he is desirous of obtaining. Such foreign graduate is thus absolved from the passing of entrance and of all the other professional examinations, and all that is further required of him is the payment of the fees for the complete curriculum, amounting for the six years of medical study to about 900 lire (£36). For this modest sum, and by passing an examination by no means difficult to one conversant with the language, the "laurea" of any of the Italian universities may be obtained by an approved candidate. A short account of how this is accomplished at, for example, the University of Rome may prove of interest. The description, with slight modifications, applies to the method followed at all the medical schools of Italy in the granting of degrees to foreign graduates. Having sent his application, accompanied by his foreign diploma, to the rector of the university, and these having been laid before the Superior Council and approved of,[1] the candidate is informed that he may present himself for the examination of the "laurea" on payment of the fees already referred to. The latter condition having been duly complied with, and the candidate having put in a written request stating his desire to appear, a date is fixed, corresponding usually to the dates arranged for the "laurea" examinations generally, which it is customary to hold twice a year—namely, in July and in November. A fortnight before the examination he must lodge with the secretary of the university a written thesis of his own composition[2] on any subject he may choose from the whole range of medical study. At the same time he gives the title of two other theses which he is prepared to defend orally. One of the latter should bear upon surgery, but with this limitation the choice of subject in these also is equally unrestricted. The examination itself is conducted orally in Italian by a specially nominated Commission consisting of a president, five university professors, and five "liberi docente," in all not less than 11 members. To one of these, termed the "Relatore," selected for his special knowledge of the subject dealt with in the written thesis, the perusal of the latter has previously been entrusted, and it is his duty before the candidate is introduced to explain to his colleagues its scope and to state the opinion he may have formed of its merits. When the candidate appears before the Commission the Relatore and any other members who may so desire bring forward objections to the facts or theories contained in the thesis in such a manner as to give him an opportunity of defending them or of explaining them more fully. They may also put questions serving to elicit the candidate's knowledge on matters naturally arising out of the subject in hand. For example, if the thesis deals with a morbid condition of some particular organ he may be called upon to give some account of the development, the anatomical structure, or the physiology of the organ. A wide field is thus opened up for discussion, however limited the question may be to which the candidate has confined himself in his dissertation. The oral theses are next dealt with in a similar manner though not at such length, the examination occupying altogether about one hour. The candidate is then asked to retire until the Commission has considered whether he should be accepted or rejected. Their decision is arrived at by voting, each member disposing of 10 votes, any or all of which he gives to the candidate according to the manner in which in his opinion the latter has acquitted himself. With 11 members on the Commission the maximum number obtainable is thus 110, but 66 suffice for a pass. The counting of the votes having been completed, the candidate is recalled, the result is announced to him, and if he has secured the requisite number of marks the degree is conferred upon him forthwith by the President. Very few British practitioners have so far availed themselves of the facilities thus offered to foreign graduates of obtaining an Italian diploma, some being deterred by their unfamiliarity with the language, others by a prevalent impression that they would not receive fair play from the examiners who are supposed to be very jealous of admitting foreigners to their degrees. This latter idea is not borne out by the experience of one of the English medical men practising in Rome who took the "laurea" of that University a few months ago. On the contrary he was treated with the utmost courtesy and not one unfair question was put to him from first to last. His examination, though long and somewhat trying on account of his imperfect acquaintance with Italian, was, he says, absolutely straightforward, and the result proved that if any partiality was shown it was in his favour since he obtained the degree with the full complement of 110 votes. While thus loyally carrying out the law as it stands at present, the Italian universities nevertheless begin to protest against a system which grants to foreigners on such comparatively easy terms privileges which native graduates only obtain at the expense of much time and study. If foreign universities returned the compliment they would not complain, but this is not so. The University of Pisa, for instance, recently addressed an appeal to the Ordini dei Medici calling for combined action for a repeal of this law, illustrating its unfairness by the case of a Swiss practitioner who had last year obtained the "laurea" of Pisa in the manner just described, although the university (Berne) at which he had taken his foreign degree offers absolutely no facilities to Italian graduates who may wish to take a Swiss diploma. Such a galling inequality is not likely to be permitted to continue, and foreign graduates ambitious of possessing an Italian degree would therefore do wisely to take it while they can.

Oct. 21st.

[1] Some of the Italian schools are not satisfied with this, but insist on the candidate producing certificates to show that he has been separately examined in, and has successfully passed at his own university, all the subjects (including, for instance, ophthalmology and dermatology) prescribed in the previous professional examinations from which he desires to be exonerated. Should the applicant be unable to furnish such certificates he is required to pass in each of the missing subjects before being admitted to the examination of the "laurea."

[2] If not actually written in Italian originally a translation of the thesis into that language must be supplied by the candidate.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

Vital Statistics of Toronto.

DURING the month of September there were registered at the office of the City Clerk of Toronto 339 births, 229 marriages, and 252 deaths. For the corresponding month of 1900 the numbers were: births, 328; marriages, 187; deaths, 290. The registration of births should be larger, as there are yet many physicians throughout the city who are careless with regard to registration, and if the parents also neglect to carry out the regulations with regard to it, it entails a diminished report. The city authorities may consider it again advisable to bring the delinquents before the police magistrate, as was done last winter.

Royalty at McGill University.

During the visit of their Royal Highnesses the Duke and Duchess of Cornwall and York while they were touring to Montreal a visit was paid to McGill University, where the Duke performed the ceremony of declaring open the new buildings erected during the summer term for the requirements of the Medical Faculty. The address of welcome was presented by the Dean (Dr. Craik), who referred to the growth of this famous institution since it was organised in the year 1824. At that time four professors looked after the welfare of 25 students. In 1829 the Montreal Medical College was incorporated with McGill University, then having only 30 students. Last year was the most successful year in the history of the Medical Faculty, there being over 490 students on the rolls. It now takes 70 odd teachers and professors to attend to the medical education of this great number of students. His Royal Highness was presented with a small casket containing a gold key to the door of the new buildings which have been made possible through the generosity of two members of the family of

Lord Strathcona—Lady Strathcona and the Honourable Mrs. Howard.

Tuberculosis.

Dr. J. George Adami, professor of pathology at McGill University and superintendent of the Dominion Pathological Laboratory, calls attention to the fact that Professor Koch's recent announcement at the British Congress on Tuberculosis is not by any means a new idea in Canada. Two years ago when the Canadian Medical Association met at Toronto, Dr. Adami contributed a paper with the title, "Is Bovine Tuberculosis Infectious from Animal to Man?" in which he maintained that this was very doubtful.

Ontario Provincial Board of Health.

The nineteenth annual report of the Ontario Board of Health has but recently been issued and gives some interesting information regarding the health of the province for the year 1900. It shows that there were 25,383 deaths reported in that year, or an average of 11·9 per 1000. The deaths from contagious diseases are given as follows: Scarlet fever, 133; diphtheria, 486; measles, 93; whooping-cough, 121; typhoid fever, 550; consumption, 2360. Consumption by months was as follows: 183, 186, 188, 203, 239, 290, 264, 180, 172, 169, 161, 215. From these returns it would appear that the death-rate from consumption in Ontario could be set down at 10 per cent. There were 161 cases of small-pox with 13 deaths. A very noteworthy decline is seen in the deaths from diphtheria during the past nine years in this province—in 1887 there were 1786 deaths; in 1893, 1044; in 1894, 1075; in 1895, 942; in 1896, 925; in 1897, 976; in 1898, 634; in 1899, 599; and in 1900, 480. The work done in the laboratory embraced an examination of 1669 specimens.

Re-opening of the Medical Schools.

The medical mills are all at work again grinding out new recruits for the ranks of medicine. In several of the principal colleges there have been great improvements made in laboratories, new buildings have been erected at considerable expense, and great preparations have been made to handle the increased influx of students. Nearly all of the colleges are claiming largely increased first-year classes; and it would appear that more young men are entering upon the study of medicine than at any other time in the history of medical education in this country. As examples of this great prosperity for the medical schools Toronto, Trinity, and McGill may be cited. Toronto has been steadily gaining ground; she has within the last three years outstripped her rival Trinity, and seems to be rapidly forging ahead of the great McGill. The number of new students at Toronto has doubled within the last four years. In 1897–8 61 students registered in the first year; in the following year there were 73; two years ago there were 104; last year there were 124; and for the present year the Dean (Dr. Reeve) is the authority for the statement that before even a single lecture was delivered a larger number of students had been enrolled than were ever enrolled before. Trinity, too, is not far behind, more students being registered on the opening day than had been registered at the same time within 20 years. What this large influx into the ranks of the medical students portends for the profession of medicine when the recent census announcement has been so disheartening will certainly form a very interesting study in the immediate future. Queen's at Kingston, in the eastern part of Ontario, seems also to be well to the fore, but if recent words of the Rev. George M. Grant, principal of that University (who is now lying seriously ill) carry any weight, Queen's is going to make a determined effort to weed out, in the English as well as in the professional branches, irreverent and under-taught students who do not take the study and the subsequent practice of their profession seriously.

Toronto Clinical Society.

The first regular meeting of this society was held on the evening of Oct. 2nd, the President, Dr. J. F. W. Ross, being in the chair. Dr. H. A. Bruce showed a specimen of a Hairy Tumour which he had extracted from the stomach of a young married woman, aged 26 years—a specimen which he also showed at the recent meeting of the Canadian Medical Association. Dr. A. A. Small presented two patients: the first was a woman of 40 years of age with a Cystic Tumour of the Right Popliteal Space which was probably growing from a tendon-sheath or from one of the bursæ; the second case was presented by Dr. Small as a case of Polymastia. The so-called supernumerary breast was situated on the back of a woman of 60 years who had borne several children. It was in appearance quite characteristic of a female breast, and its exact location was just behind the posterior axillary line of the right side, corresponding to the lower portion of the scapula. The small, nipple-like tumour had always been present, but the larger tumour upon which it was set had only developed within the last five years. Close inspection could not demonstrate any ducts opening on to the surface of the smaller tumour. The breast never underwent any changes when lactation was present. The general opinion was that the tumour was a lipoma, but it certainly looked very much like an ordinary female breast. Dr. A. A. Macdonald showed a specimen of a Cystic Adenoma of the Breast. He believed in removing the entire breast in these cases. An interesting point in this specimen was that eight weeks before operation no tumour could be demonstrated, although pain was a persistent symptom.

Toronto Medical Society.

This society opened for the winter session of 1901–1902 on the evening of Oct. 3rd, with Dr. F. N. G. Starr, the newly elected president, in the chair. Dr. Starr delivered a very interesting address on the deceased members of prominence and distinction in the profession from the days when Toronto was known as the "muddy town of York" down to the present time. The lecture, which was illustrated with the photographs of these fathers of medicine in this city thrown upon the canvas, was much appreciated by the members of the society. Mr. Irving H. Cameron showed a number of Calculi, 14 small ones of the collection having been extracted from the cul-de-sac behind the prostate in the bladder of an old gentleman, aged 76 years; the operation was by high section. Dr. Graham Chambers presented a patient, a girl, aged 13 years, who ever since three years of age had been troubled with Hydroa Vacciniforme. Several scars could be defined upon the patient. Under full doses of arsenic she was now clearer of lesions than she had been at any time since the trouble began. Dr. Alexander Primrose and Dr. Graham Chambers presented a young man, aged 25 years, who came to Dr. Primrose with several warty outgrowths on different portions of his body. One appeared on the right malar bone, another on the right shoulder, another on the neck, and still another at the inner canthus of the right eye, simulating an epithelioma. Dr. Chambers diagnosed the condition as blastomycosis which was subsequently confirmed by finding the fungus under the microscope. Dr. Primrose operated by excising portions of the growths and applying the actual cautery. Two lantern-slide presentations on the canvas showed how much these lesions had improved. The patient took 80 grains of iodide of potassium three times a day for a period of six weeks.

Oct. 5th.

Obituary.

ROBERT HEPBURN, L.D.S.R.C.S. ENG.

AT the advanced age of 92 years Mr. Robert Hepburn died at his residence, No. 9, Portland-place, London, on Oct. 17th. Although full of years, and although his youth and middle age were passed amongst a generation that has gone by, his interest in life remained with him to the end, and he took his full share in social and philanthropic work until almost the last days of his existence. Robert Hepburn was born in Edinburgh, at Croft-an-righ, on Jan. 1st, 1810. He was educated at the High School of Edinburgh and in his early youth became apprenticed to a dentist. He left Edinburgh and came to London when he was 21 years of age and in London he lived and worked all his life. His profession brought him success and fortune whilst he practised in Davies-street, Berkeley-square, and later at 9, Portland-place. One of the pioneers in establishing dentistry on a scientific basis he was one of the very first to take the dental diploma at the Royal College of Surgeons of England when that corporation began to issue diplomas in dentistry. In 1859 Mr. Hepburn took a prominent part in founding the Dental Hospital of London, and it must have been very gratifying to him to know that the institution he fostered so carefully is at the request of the King, who has graciously consented to become the patron, to be styled in future the Royal Dental Hospital of London.

Mr. Robert Hepburn had long been known in professional dental circles as a wise and zealous reformer, for we read in a paper which was read by Mr. Alfred Hill in 1856 that "throughout the entire effort to raise the status of the dental profession and among its truest workers and supporters there has been no more candid worker and no more sincere and interested coadjutor than Mr. Hepburn." This honest endeavour to raise the position of the dental profession to a better status than he found it in was the keynote of his professional life and in this good work he had abundant evidence of success. Professional honours were Mr. Hepburn's in plenty. He was surgeon to the Dental Hospital of London; he was an early member, and afterwards president in 1870, of the Odontological Society of Great Britain; and at the London School of Dental Surgery Mr. Hepburn held the lectureship on Mechanical Dentistry for many years. By his colleagues Mr. Hepburn was highly respected for his professional ability and for his loyal exertions in their behalf at all times.

When we turn to his social life we find a theme which it is indeed difficult to do justice to. His professional work we can in some degree estimate; the positions he attained in learned societies have been held with distinction by other men; but Mr. Hepburn's social qualities can only be estimated by those who came in contact with him and who came under the magic of his personality. It was, perhaps, chiefly in Scottish circles in London that he was best known, but in every sphere of life his courtesy was recognised, his large-heartedness was appreciated, and the charm of his overflowing geniality commanded friends everywhere. Of fine physique—he stood six feet three inches and was proportionately broad and deep-chested—he has left few physical equals or physical superiors in the realm. His mental and social qualities were modelled upon his physical, and gave us a picture of strength, manliness, and amiability of character. These qualities were excellently portrayed by Sir Daniel McNee, President of the Royal Scottish Academy, in his painting of Mr. Hepburn. In 1857, when the picture was painted, Mr. Hepburn was in his prime, and never had painter a more handsome model to delineate. The portrait was presented by the members of the Caledonian Society of London, a society of which Mr. Hepburn was at once the founder and father. Eleven times was Mr. Hepburn elected president of this society, and by his constant endeavour, the urbanity of his manner, and his ever open-handed charity he played the chief part in carrying the society to a flourishing state. In every Scottish charity in London he played a part. The authorities of the Royal Caledonian Asylum recognised the work he did in behalf of that institution by the presentation of an illuminated address. He was a loyal supporter and a vice-president of the Royal Scottish Corporation, and it was at a meeting of this corporation that he made his last public appearance, when on Jan. 31st, 1900, he seconded a motion made by Lord Rosebery conveying a message of condolence on the death of Queen Victoria from the Royal Scottish Corporation. In many other ways Mr. Hepburn found an outlet for his charity. He founded, and acted as treasurer for no less than 37 years to, the Ogle Mews Ragged School, and of the Somers Town Blind Aid Society he was a vice-president. Mere statements of positions held, however, convey but an inadequate picture of the man. His deeds may not look different from those of many other men when reduced to mere historical records; but neither pen nor pencil can delineate the charm, the courteous bearing, and the warm-hearted geniality of Mr. Robert Hepburn.

CHARLES KING, M.R.C.S. ENG., L.S.A.

MR. KING, whose death was recorded lately at the age of 76 years, was born at Southampton. His medical education was pursued at Guy's Hospital and to the end of his life he reverted with constant pleasure and respect to the men of that school, particularly to Mr. Aston Key (for whom he acted as dresser), Dr. Addison, and others. After becoming qualified he was engaged for some time in the service of the Peninsular and Oriental Company and then he commenced practice in the City-road, where he remained for three or four years. Thence he removed to Highbury-park, where he succeeded Dr. Dobson who had recently died. Mr. King continued to practise there for 43 years, enjoying for the most part excellent health until a few months before his death, when he rapidly failed. He had a somewhat brusque and Johnsonian manner but was a man of high character and was greatly esteemed by his patients and by his professional brethren.

HENRY DUNCALFE, M.R.C.S. ENG., L.S.A., J.P.

WIDESPREAD regret is felt at the death of Mr. Henry Duncalfe, which took place on Oct. 20th in his seventy-third year. Failing in health for some months past he left his home at Sutton Coldfield to undertake a course of treatment at the brine baths at Droitwich. On the evening preceding his death he was seized with an attack of heart failure, to which he succumbed a few hours later in the presence of his wife who had accompanied him. Mr. Duncalfe was born at Walsall, was educated at the Grammar School, and was afterwards apprenticed to Mr. Edwards, a surgeon of that town. Subsequently he entered as a medical student at Guy's Hospital, becoming a Member of the Royal College of Surgeons of England and a Licentiate of the Apothecaries' Society in 1851. He then joined Mr. Allerton of West Bromwich, and at the death of this gentleman some three years later he acquired the practice which he developed into a large and prosperous undertaking. His strength was hardly equal to the continued strain of the size to which his practice grew and in 1874 he ceded his work to his partner, Mr. A. P. Evans, and retired to Sutton Coldfield. Here he acquired a small practice and a sphere congenial to his tastes and habits, forming a circle of friends who held him in the highest regard and esteem.

Mr. Duncalfe became associated with the public work of the borough of Sutton Coldfield and was elected warden and chief magistrate under the old corporation. He took an active interest in educational matters also, being a governor and chairman of the Grammar School Board. Subsequently his name was placed upon the commission of the peace for the county of Warwick, where his judgment, his fairness, and his impartiality were always respected.

Mr. Duncalfe was an accurate observer of nature. As a student of natural history in his early days he formed a large and interesting collection of butterflies and moths. His tastes were largely of a scientific order and in this direction led him to precision and cleverness in his professional practice. In 1862 he was elected president of the Birmingham and Midland Counties Branch of the British Medical Association and he contributed several papers of practical interest to the branch. As a sagacious counsellor, a firm friend, and a public-spirited citizen his name will long be remembered. He leaves a widow and a daughter to mourn their loss.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—In October the following candidates passed in the subjects indicated:—

Surgery.—C. E. C. Child (Section II.) and G. B. Dixon (Sections I. and II.), Charing Cross Hospital; P. J. Fitzgerald, Dublin; I. Griffith (Section I.), London Hospital; W. B. Harris (Section I.), St. Mary's Hospital; D. Morrow (Sections I. and II.), Middlesex Hospital; and W. Parker (Section I.), Manchester.

Medicine.—D. E. Lockwood (Section II.), Royal Free Hospital; E. E. Naggiar (Sections I. and II.), St. Mary's Hospital; W. Parker (Sections I. and II.), Manchester; and F. M. Payne (Section II.), Royal Free Hospital.

Forensic Medicine.—E. C. Curtis, Charing-cross Hospital; R. Gillett, Royal Free Hospital; and E. E. Naggiar, St. Mary's Hospital.

Midwifery.—T. J. M. Clapperton, King's College Hospital; A. F. Heald, Cambridge; P. S. Hopkins, London Hospital; H. Johnson, Guy's Hospital; G. F. G. de Laubenque, Middlesex Hospital; T. G. Miles, Guy's Hospital; W. Parker, Manchester; H. Richardson, Leeds; C. W. Smith, Sheffield; and A. Turner, Charing-cross Hospital.

The Diploma of the Society was granted to the following candidates, entitling them to practise medicine, surgery, and midwifery:—C. E. C. Child, G. B. Dixon, P. J. Fitzgerald, D. Morrow, E. E. Naggiar, and H. Richardson.

UNIVERSITY OF EDINBURGH.—At the special graduation ceremonial held on Oct. 19th the following degrees were conferred:—

Degrees of Bachelor of Medicine and Master in Surgery.—Clarence Granville Hey, England; Arthur Hutton M'Shine, Trinidad; Albert Cormac Peterson, Australia; Percy Wilfred Shepherd, England.

Degrees of Bachelor of Medicine and Bachelor of Surgery.—Arthur John Brock, Scotland; Alfred Brown, Scotland; John Webster Duffus, M.A., Scotland; John Munro Dupont, England; William

Francis Lucius Austen Holcroft, England; John Jamieson, Scotland; Ernest Winbolt Lewis, India; Harriet M'Cloghry, Ireland; John Bryce M'Cutcheon, Ireland; Lionel Alexander MacMunn, England; Kenneth Duncan Cameron Macrae, Scotland; Antoine Felix Gaston Masson, England; Robert Murray, Scotland; Peterswald Pattison, Scotland; George Archibald Park Ross, Scotland; Richard Rutherford, Scotland; George William Smith, Scotland; Charles William Somerville, Scotland; William Casswell Spooner, England; George Henry Steven, Scotland; George Cecil Strathairn, Scotland; James Paget Thorne, England; Noel Nathaniel Wade, Wales; Ernest Alexander Walker, Scotland; Douglas Larmer Wall, England; Harold Edgar Wareham, England, and Philip Weatherbe, Canada.

Special University Certificate in Diseases of Tropical Climates.—Antoine Felix Gaston Masson, M.B., Ch.B.

Degree of Bachelor of Science.—Joseph Samuel Martyn, M.A.; and in the Department of Public Health, John Fleming Goodchild, M.D.

OXFORD WOMEN'S AMBULANCE SOCIETY.—The Mayor of Oxford (Mr. G. C. Druce), who is also president of the Pharmaceutical Conference of Great Britain and Ireland, distributed on Oct. 18th the certificates and medals awarded to the members of the society who had been successful in the examinations. There was a crowded attendance of ladies. Mr. E C. Hale Jessop (honorary secretary) stated that since February, 1899, 398 had attended the classes, 265 had entered for the examinations, and 211 had received certificates. The ladies also had three nursing classes, 52 receiving certificates. The figures went to prove that the ladies took far greater interest in the work than the men. The mayor congratulated the members on the results and made some sound remarks emphasising the need for precaution against the transmission of disease by dust, dirt, polluted water, and clothing.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.—At the stated annual meeting of the President and Fellows held on St. Luke's Day, Oct. 18th, Dr. W. A. Winter was elected a Fellow of the College.

MEDICAL ALDERMAN.—At the meeting of the Plymouth Borough Council held on Oct. 14th, Mr. John Henry Square May, M.R.C.S. Eng., L.S.A., J.P., was unanimously elected an alderman for the borough.

LUNACY IN SOMERSET.—At the meeting of the Somerset County Council held on Oct. 15th, it was reported by the Joint Lunatic Asylums Committee that there were 1320 lunatics (760 females and 560 males) on the books, as compared with 1300 for the corresponding date of 1900. The weekly charge to be made to the unions during the ensuing quarter has been fixed at 9*s.* 4*d.* per head.

CENTENARIANS.—It is stated that Mrs. Elizabeth Wilmot of Kirkby Laythorpe, near Sleaford, Lincolnshire, who is now in her 102nd year, was last September awarded a prize for needlework at a local industrial exhibition.—Mrs. Southall of Wellington-road, Edgbaston, Birmingham, last September celebrated her hundredth birthday in the midst of a large circle of children, grandchildren, and great-grandchildren. Till about 80 years of age she led a life of great activity and visited for 40 years in the service of the Aged Women's Society, of which she was one of the principal founders. Mrs. Southall attributes her longevity chiefly to her abstinence from intoxicants. She signed the temperance pledge nearly 70 years ago, and ever since that time temperance work has had her warmest sympathy. She was born in 1801 in Great Charles-street, Birmingham, and married in 1824 the late Mr. Thomas Southall of Bull-street, whom she has survived for 40 years.

NEGLECT AT BIRTH.—An inquiry was held at Newton Abbot (Devon) on Oct. 12th relative to the death of the new-born child of the wife of a soldier who has been in South Africa for two years past. The woman was delivered of the child on Sept. 17th with only her sister, a girl, aged 16 years, in the house. The sister wanted to fetch assistance, but the mother declined, as "she wanted to keep it quiet." The infant died shortly after its birth. The next day a medical man was called in and asked to give a certificate of still-birth. He declined to do so, and at the inquest he stated that the lungs were only partly inflated and added that if the child had been properly attended at birth it would probably have lived. The jury eventually returned a verdict that the infant had died through the wilful neglect of the mother in not procuring the necessary assistance at birth. The deputy coroner said that was tantamount to manslaughter and the woman was committed to take her trial at the assizes.

UNIVERSITY OF CAMBRIDGE.—From returns kindly furnished by the college tutors, it appears that the number of freshmen intending to study medicine at Cambridge is 115.

A NEW SANATORIUM FOR CONSUMPTIVES.—On Oct. 18th the Countess of Derby opened, in Delamere Forest, Cheshire, a sanatorium, the gift of Lady Willox and Mr. W. P Hartley of Liverpool. The new buildings will be used in connexion with the Liverpool Hospital for Consumption and Diseases of the Chest. The sanatorium has cost nearly £15,000.

GENEROUS GIFT TO FROME HOSPITAL.—At a meeting of the Victoria Hospital and Nurses' Home Committee, held at the public offices, Frome, on Oct. 18th, Major Sheppard, one of the joint honorary secretaries, announced that Mrs. Chandless of Brighton had expressed her intention of giving £2000 to the hospital for the purpose of endowing two beds. Mr. Alfred Parsons, A.R.A., has offered to furnish the committee with a plan for the laying out of the grounds, which has been accepted.

REMUNERATION OF A MEDICAL OFFICER OF HEALTH.—At the Guildford County Court on Oct. 17th Mr. H. Beale Collins, medical officer of health of the borough of Kingston, sued the Guildford Rural District Council for £32 11*s.* for work performed in connexion with the preparation of the annual health report for the period January to July, 1900. It appeared that in March, 1900, Mr. Wellington Lake, medical officer of health of the Guildford Rural District Council, went to South Africa and died there on July 16th of that year. Mr. Collins made an arrangement with Mr. Lake to take over the duties of the latter as medical officer of health as a friendly act without any remuneration whatever beyond out-of-pocket expenses. The council requested him to make up the report for the half-year but declined to pay for the work. In giving judgment his honour said that during the period in question Mr. Collins was not a servant of the council, but Mr. Lake was the responsible person. After Mr. Lake's death there was no legal machinery to compel Mr. Collins to make out that report. He therefore gave judgment for the plaintiff for the amount claimed with costs.

AN INSANITARY AREA IN BIRMINGHAM.—In June last the Rev. T. J. Bass, vicar of St. Laurence's, Birmingham, and 12 ratepayers connected with that church signed a requisition calling attention to the insanitary condition of a portion of the parish extending to 14¼ acres. This requisition, which has been presented under the Housing of the Working Classes Act, 1890, stated that the annual death-rate in this area was about 40 per 1000. A report by Dr. Alfred Hill, the medical officer of health, was to the effect that the number of dwelling-houses in the area was 589, with a population of 2429. The district included many non-residential spaces, such as works, factories, and yards. If the area allotted to the dwellings only were taken into account the number of persons per acre was 272, as against 41 per acre for the whole city. The houses seemed to combine all possible sanitary defects. The Birmingham *Daily Argus* says that under the Housing of the Working Classes Act, 1890, responsibility now devolves upon the city council, which may prepare an improvement scheme and submit it to the Local Government Board, or in the event of the corporation not seeing their way to take action they must lay the facts before the Local Government Board, who may hold an independent inquiry.

"RETURN" CASES OF INFECTIOUS DISEASE.—At a meeting of the Metropolitan Asylums Board on Saturday, Oct. 19th, the Hospitals Committee reported that they had considered a communication from the Local Goverment Board, enclosing a copy of a letter from the grandfather of a patient in one of the board's hospitals. The writer stated that his grandson, a convalescent scarlet fever patient, was discharged from the Northern Hospital on August 3rd, and four days afterwards was admitted into the Eastern Hospital, suffering from diphtheria, his sister being received into the same hospital, also suffering from diphtheria, two days later. Reports on this case had been received from Dr. Hague, the acting medical superintendent of the Northern Hospital, and from Dr. Cameron, the board's medical investigator of returned cases. From these reports it appeared that the patient was thoroughly examined before he was discharged from the hospital, and that there was then

no evidence of diphtheria or of his being in any way ill. On the day following his discharge, as the child did not seem very well, the mother appears to have taken him to see two separate practititioners, neither of whom diagnosed the case as diphtheria. On August 7th the child was visited by another practitioner both in the morning and evening, and on the latter occasion was certified to be suffering from diphtheria. The committee were informed that it was a matter of common experience for symptoms of laryngeal diphtheria to show themselves with great suddenness, and this appears to have been the case with the boy in question. The report was adopted.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

BENNETTS, A. J., M.R.C.S., L.R.C.P. Lond., has been appointed Assistant Medical Superintendent of the Infirmary and Assistant Medical Officer of the Gordon-road Workhouse of the Parish of St. Giles, Camberwell.

BIRD, ARTHUR CYRIL, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Honorary Surgeon to the Victoria Cottage Hospital, Sidmouth, Devon, vice A. Macindoe, resigned.

BROWNLEE, ALEX., L.R.C.P. & S.E., L.D.S. Edin., has been appointed Senior House Surgeon to the Ingham Infirmary, South Shields, vice H. Crechtar, resigned.

BYGOTT, ALBERT HENRY, M.B. Lond., has been appointed District Medical Officer and Public Vaccinator for the Deritend and Bordesley Districts of the Aston Union, vice Flamank Marshall (deceased) and B. S. Robins.

COLLINS, E. TREACHER, F.R.C.S., has been appointed to the newly created post of Ophthalmic Surgeon to the Charing-cross Hospital and Lecturer on Ophthalmology at the Medical School.

CUFFIELD, A., M.R.C.S., L.S.A., has been appointed Medical Officer for the Urban District of Ross.

DEACON, MARY STEWART, M.B., B.S. Lond., L.R.C.P & S. Edin., has been appointed Medical Officer of Health to the Accra Town Council, West Africa.

EVANS, C. W., M.B. Lond., M.R.C.S., has been re-appointed Medical Officer of Health for Bakewell for a further period of five years.

FORSYTH, A. F., M.B., C.M. Aberd., has been appointed District Medical Officer for Kea and West Kenwyn by the Truro Board of Guardians.

HICHENS, FRANK, M.D., B.S. Lond., M.R.C.S., L.S.A., D.P.H. Lond., has been re-appointed Medical Officer of Health for Redruth (Cornwall).

JACKSON, D., M.D., L.F.P.S. Glasg., has been appointed Medical Officer for the Urban District of Hexham.

LAMB, J. M. A., L.S.A., has been appointed District Medical Officer of the Poole Union.

SUTCLIFFE, W., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer of the West Bromwich No. 3 District.

SYKES, WALTER, L.R.C.P., L.R.C.S. Eng., L.F.P. & S. Glasg., has been appointed Junior House Surgeon to the Birmingham and Midland Eye Hospital.

THOMAS, J. C., M.D. R.U.I., L.F.P.S. Glasg., has been appointed Public Vaccinator for Metropolitan District, Victoria.

WACE, R. H., M.B. Aberd., has been appointed District Medical Officer, Quarantine Officer, and Public Vaccinator at Onslow, West Australia.

WILLETT, GEORGE GILMORE DRAKE, M.R.C.S., L.S.A., has been appointed Medical Officer for the Marksbury District by the Keynsham Rural District Council.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BELGRAVE HOSPITAL FOR CHILDREN.—Honorary Dental Surgeon.

BETHNAL GREEN INFIRMARY.—Assistant Medical Officer. Salary at rate of £100 per annum, with furnished apartments, board, and washing.

BRACEBRIDGE ASYLUM, near Lincoln.—Junior Assistant Medical Officer, unmarried. Salary £125 per annum, with apartments, board, attendance, &c.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's-inn-road, W.C.—House Surgeon. Salary at rate of £50 per annum, with board and residence.

COUNTY ASYLUM, Lancaster.—Assistant Medical Officer, unmarried. Salary £150, increasing to £200, and on promotion to £250, with apartments, board, washing, and attendance.

DUMFRIES AND GALLOWAY ROYAL INFIRMARY.—House Surgeon. £50 per annum, with board and washing.

ESSEX COUNTY ASYLUM, Brentwood.—Fourth Assistant Medical Officer. Salary £150 per annum.

GLOUCESTER GENERAL INFIRMARY AND GLOUCESTERSHIRE EYE INSTITUTION.—Assistant House Surgeon for six months. Remuneration at rate of £30 per annum, with board, residence, and washing.

GRIMSBY AND DISTRICT HOSPITAL.—Resident House Surgeon. Salary £30 per annum, with board, lodging, and washing.

GROVE HALL ASYLUM, Bow, London, E.—Junior Assistant Medical Officer. Salary £120, with board, apartments, attendance, and laundry.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident Medical Officer. Salary £200 per annum, with board and residence.

HOSPITAL FOR DISEASES OF THE THROAT, Golden-square, W.—Senior Clinical Assistants for six months, renewable.

INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Junior House Surgeon. Salary £75 per annum, with residence, board, and washing.

LEICESTER INFIRMARY.—Assistant House Surgeon. Salary £30 per annum, with board, apartments, and washing.

LINCOLN COUNTY HOSPITAL.—Senior House Surgeon, unmarried. Salary £100 per annum, with board, lodging, and washing.

LONDON HOSPITAL, Whitechapel, E.—Aural Surgeon.

LONDON TEMPERANCE HOSPITAL, N.W.—Medical Officer for six months. Honorarium at the rate of 50 guineas per annum, with board and residence.

MACCLESFIELD GENERAL INFIRMARY.—Junior House Surgeon. Salary £70 per annum, with board and residence.

ROTHERHAM HOSPITAL.—Assistant House Surgeon. Salary £30 per annum, with board, &c.

ROYAL SEA BATHING HOSPITAL, Margate.—Resident Surgeon, as Junior for six months and then as Senior for the like period. Salary at rate of £30 and £120 per annum respectively, with board and residence. Also Honorary Visiting Surgeon.

ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Surgeon and Assistant Surgeon.

RURAL DISTRICTS IN THE COUNTIES OF LEICESTER, RUTLAND, AND WARWICK.—Medical Officer of Health. Salary £550 per annum (inclusive of travelling and other expenses).

SALFORD ROYAL HOSPITAL.—Two Honorary Medical Officers.

SALISBURY INFIRMARY.—House Surgeon, unmarried. Salary £100 per annum, with board, lodging, and washing. Also a House Physician under 30 years of age and unmarried. Salary £75 per annum, with board, lodging, and washing.

SCHOOL BOARD TRUANT SCHOOL, Highbury-grove, N.—Medical Officer. Salary £125 per annum.

ST. MARK'S HOSPITAL FOR FISTULA AND OTHER DISEASES OF THE RECTUM, City-road, London, E.C.—Honorary Physician.

UNIVERSITY OF GLASGOW.—Examiner for Degrees in Medicine and Science, with special reference to Chemistry. Salary £30 per annum. Also Examiners for Degrees in Medicine, with special reference to (1) Materia Medica and Therapeutics, (2) Zoology, (3) Practice of Medicine (Systematic and Clinical), and (4) Surgery (Systematic and Clinical). Salary for (1) and (2) £30 each and for (3) and (4) £50 each.

WEST RIDING ASYLUM, Wakefield.—Locum Tenens for three months. Salary £3 3s. per week, with apartments and board.

WESTERN DISPENSARY, Rochester-row, Westminster, S.W.—Attending Medical Officer.

WESTERN GENERAL DISPENSARY, Marylebone-road.—Honorary Physician.

Births, Marriages, and Deaths.

BIRTHS.

ALEXANDER.—On Oct. 14th, the wife of W. G. Alexander, M.B., M.S. Edin., of a son.

LEVICK.—On Oct. 16th, at Havant, to the wife of George Levick, a son.

SANDALL.—On Oct. 13th the wife of Thomas Edward Sandall, M.B., B.C. Cantab., M.R.C.S., L.R.C.P. Lond, of a daughter.

MARRIAGES.

ARMOUR—MITCHEL.—At Cobourg, Canada, on Oct. 2nd, 1901, Marie Louise, daughter of the late Captain O. M. Mitchel, U.S.A., and stepdaughter of James Hoban, Esq., of Washington, D.C., to Donald John Armour, M.B., F.R.C.S. Eng., son of the Hon. the Chief Justice of Ontario.

COOMBE—JOHNSTONE.—On Oct. 22nd, at St. Barnabas, Beckenham, by the Rev. A. H. Cooke, M.A., Fellow of King's College, Cambridge, head-master of Aldenham School, assisted by the Rev. N. M. Morgan-Brown, M.A., minor canon of St. Paul's, and the Rev. George Griffith, vicar, Russell Coombe, M.A., M.D. Camb., F.R.C.S. Eng., of Exeter, to Eve Harriot Cartledge, eldest daughter of John Cartledge Hirst Johnstone, J.P., of Beckenham, and formerly of Hardwick Hall, County Durham.

FOOKS—BAINES.—On Oct. 16th inst., at the parish church, Naburn, York, by the Bishop of Sodor and Man (uncle of the bride), the Rev. Randall Vickers (vicar), and the Rev. Richard Freeman, Edward Verdon Russell Fooks, M.R.C.S., L.R.C.P., younger son of Walter Pemberton Fooks of Auckland, N.Z., to Hilda Jane Maud, daughter of William Mortimer Baines of Belt Hall, York.

GOING—EDGECOMBE.—On Oct. 16th, at St. Nicholas's Church, Blundellsands, Robert Marshal Going, F.R.C.S., to Fanny Augusta, daughter of the late George Edgecombe.

YOUNGE—RAWCLIFFE.—On Oct. 17th, at St. George's Church, Hanover-square, London, Thomas M. Young, M.B., M.S. Edin., to Florence Annie, third daughter of Henry Rawcliffe.

DEATHS.

APLIN.—On Oct. 21st, at Hill House Notts County Asylum, Alfred Aplin, M.D., M.R.C.S., L.R.C.P., aged 47, Resident Medical Superintendent of Notts County Asylum.

BENNETT.—On Oct. 18th, at his residence, Sloane-street, Francis Graham Bennett, M.R.C.S., L.S.A., aged 59.

BENTHAM.—On Oct. 15th, at Ellersilc, Willesden, London, N.W., Robert Bentham, M.D. Aberd., aged 81.

HOLDING.—On Oct. 17th, at East Hendred Rectory, the residence of his son-in-law, Charles Holding, F.R.C.S., late of Victoria-street, Westminster, aged 93 years and 9 months.

PEETE.—On Oct. 20th, at Great College-street, Brighton, Thomas Peete, M.D. St. And., M.R.C.S., L.S.A., formerly of Margate and Tunbridge Wells, aged 76.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

"HOW DISEASE IS SPREAD."

AT an inquest held by the East London coroner at Stepney on Oct. 10th, it was mentioned that six persons of one family, varying from the age of two years to 17 years, had been suffering from small-pox without being medically attended. None of the sufferers had been vaccinated. Two of the children had been attending school and the elder lad had been out at work. That such a state of things should exist is remarkable and but for the prompt action of a medical man another nidus of infection might have been added to the seriousness of the prevailing epidemic. At the same inquest the coroner mentioned that a woman living in the house of the above-mentioned family had been found drunk in the street and suffering from small-pox. On Oct. 15th a female inmate of St. Giles Casual Ward was certified to be suffering from small-pox and while the ambulance was being requisitioned the woman escaped from the ward. After exchanging and re-exchanging her clothes with a blind woman to escape discovery she was found the following day in a state of intoxication on a doorstep in the parish from which she escaped. She was covered with eruption. Had the woman not been discovered she would have slept for the night in a house let in tenements and the consequences would perhaps have been serious. Great praise is due to Mr. Shirley Murphy and Mr. A. Wynter Blyth whose prompt action and zeal effected the woman's capture. Quite recently a man who had returned to Warminster from London was retained in the Warminster Workhouse suffering from small-pox. Another case of allowing children while suffering from an infectious disease to mingle with their fellows is also reported. In this case the child had been suffering from scarlet fever and was in the peeling stage. The bench, remarking that the public must be protected, fined the parent the ridiculously small sum of 2s. 6d. Dr. J. C. Thresh, the medical officer of health of Chelmsford, has reported the following case. On Oct. 5th a medical man called on him saying that there was a case of diphtheria at Springfield which he wished removed at once. As the ambulance had just gone out for a patient and would not be back till very late Dr. Thresh agreed that the patient should be admitted to the infectious hospital if some way of removal could be found. Later, a cab conveyed the patient to the hospital, and after leaving the patient with the nurse the driver took the cab away, although he (Dr. Thresh) had given instructions that the vehicle should be disinfected. It was subsequently discovered that the driver was not told that he was conveying an infectious case, and that on leaving the hospital he drove a lady and gentleman to a dinner-party. The Chelmsford Rural District Council have decided to take proceedings against the father of the patient in this case.

"QUERIES ABOUT NEW ZEALAND."

To the Editors of THE LANCET.

SIRS,—Referring to the correspondence in THE LANCET of Oct. 19th, p. 1094, under the above heading, *Sharland's New Zealand Journal* and the *New Zealand Medical Journal* are the only medical journals of the colonies. Particulars may be had from us.

We are, Sirs, yours faithfully,

43, London Wall, Oct. 19th, 1901. SHARLAND AND CO.

"QUO VADIS" CIGARETTES.

THE Ardath Tobacco Co., of 44, Worship-street, London, E.C., have submitted to us some specimens of Turkish cigarettes, the tobacco of which they state is of a particularly pure kind and free from "faking" and from "scenting" matter. We could certainly trace no glycerine or added saccharine matter or any odour not due to tobacco. The tobacco itself is a satisfactory quality of Dubec. The smoke is agreeably aromatic and free from pungency. It would be better, we think, if the cigarettes could be made thicker so as to diminish the ratio of paper to tobacco.

ELECTRICAL MANIFESTATIONS IN THE TREATMENT OF DISEASE.

THE particular form of etheric disturbance known as electricity has without doubt a powerful influence upon nutrition, and treatment by electricity is nowadays, as our columns bear witness, on its trial as a means of combating various morbid conditions. Electricity itself can be used in varied forms or can be easily converted into light or heat. But inasmuch as the apparatus for producing it in any quantity is not capable of being moved about easily it is more convenient as a rule to bring the patient to the electricity than to reverse the process. Electrical institutions have, up to the present, so far as we know, never confined themselves to working as an adjunct to medical practitioners. They have always treated patients on their own account. The latest institution of the kind, however, claims, and we think with justice, to work solely with the medical profession. That is to say, a patient applying for treatment must be provided with a recommendation from a medical man, and the management of the institution prefer that this medical man should superintend the treatment himself. The institution is known as "The Electrical Ozone and Light Treatment," 14, Hanover-square, W. The installation consists of a series of comfortable rooms and cubicles for electric light-baths. The patient lies, undressed, on a plate-glass couch where he is exposed to the radiations of two sets of incandescent lamps which are arranged both above and beneath the couch. Free perspiration is quickly induced and the patient is subsequently massaged by a trained operator. A d'Arsonval high frequency apparatus is used to ozonise the air of the cubicle during the exposure in the light bath, and this apparatus is also arranged for the direct application of high frequency currents to the patients, if required. There are separate rooms and a masseuse for ladies. We think that probably the most valuable therapeutic agent will be found to be the electric light-baths. The ozone, beyond keeping the air of the cubicles fresh, has, we should say, but little effect.

OPEN-AIR SANATORIA FOR THE TREATMENT OF PHTHISIS.

To the Editors of THE LANCET.

SIRS,—I would be glad if any of your readers could kindly inform me of an open-air sanatorium for a consumptive patient. Terms from 10s. to 30s. a week. Patient is a case that has greatly improved while residing at a farm for the last six months, but requires further treatment. Has the National Association for the Prevention of Consumption and other Forms of Tuberculosis been instrumental in establishing such sanatoria in the South or Midlands? if so, where? I venture to ask this, as some time has elapsed since you published an article in THE LANCET dealing with open-air institutions in 1899.

I am, Sirs, yours faithfully,

Oct. 21st, 1901. J. T. V.

**** A few sanatoria have been established by private or local generosity and more are contemplated.—ED. L.

THE ANDERSON FUND.

THE committee formed to appeal for aid for the widow and two sons of the late Mr. R. B. Anderson, F.R.C.S. Eng., beg to announce the following additional list of subscriptions from July 26th to Oct. 22nd The total amount now subscribed is 73 guineas.

	£	s.	d.		£	s.	d.
Mr. Edmund Owen ...	2	2	0	Mr. W. F. Brook	1	1	0
Mr. Reg. Gilbert	2	0	0	K. W. M.	1	1	0
Dr. G. Danford Thomas	2	2	0	Mr. G. B. Forge	1	0	0
Dr. F. de Havilland Hall	2	2	0	Mr. A. H. Dodd	1	1	0
Dr. Connel	1	0	0	Dr. Collier	2	2	0
H. C. M.	0	5	0	Dr. W. J. Branch	1	0	0
Mr. W. B Burchell ...	1	1	0	Mr. G. Jackson	1	1	0
Dr. Edmund Frost ...	2	2	0	Mr. R. J. Page Smith ...	1	1	0
Mr. B. Balding	1	1	0	Captain W. R. Battye, I.M.S.	1	1	0

Donations for "The late R. B. Anderson Fund" should be sent and made payable to the Manager, Union Bank of London, Chancery-lane, London. As it is proposed to close the fund at an early date intending subscribers are requested to send in their donations without delay. The Earl of Stamford is the chairman; Mr. Timothy Holmes, F.R.C.S., is the honorary treasurer; and Mr. Walter Monnington, 7, Fig Tree-court, Temple, E.C., is the honorary secretary of the Fund.

"HOMES FOR EPILEPSY."

To the Editors of THE LANCET.

SIRS,—Your correspondent "M.D." in THE LANCET of Oct. 19th, p. 1094, should try to get his patient into the Magull Home for Epileptics near Liverpool or the Epileptic Colony near Chalfont St. Peter, Bucks. I am, Sirs, yours faithfully,

Didsbury, Oct. 20th, 1901. JOHN MILSON RHODES, M.D. Brux.

MEDICINE AND POLITICS IN FRANCE.

A LADY writing over the signature "Grace Corneau" in the *Daily Mail* of Oct. 19th gives some interesting details regarding the medical profession in France and the association of its members with politics. At the last election "the large number of 51 doctors were elected to the Chamber of Deputies," while "among the members of the Senate a surprising proportion of medical men were also returned." According to the writer, such a selection of legislators is an amazing circumstance, quite incomprehensible to an Englishman, and yet immediately afterwards she adduces reasons, which she characterises as adequate, why the career of medicine should be looked upon by our neighbours as the "road to rulership." From sunrise to sunset, sometimes far into the night, the country practitioner drives about in his little "cariole," having with him, besides his medicine case, all kinds of books, newspapers, and "revues" (magazines or pamphlets), which he distributes among his patients. At every habitation he stops to chat with the occupants, thus discussing politics from one year's end to the other. "It is not strange," adds Madame Corneau, "that under these conditions ..... the doctor propagates his political opinions, makes himself popular, and becomes ..... the preferred candidate of his 'concitoyens' (fellow-citizens)." Many young men in France regard medicine as one of the surest roads to public life, but it is sad to learn that they are driven thereto because "nothing is more ungrateful than the medical profession in the provinces."

A provincial practitioner's fees are described as "pathetically modest." For what are called "office consultations" the peasant pays from 1s. 2½d. to 1s. 8d., and the latter fee, with 5d. a mile for "déplacement" is also the usual charge for a visit. Very frequently, however, the miserly sick man will evade the depletion of his well-filled purse by presenting his attendant with "a lean goose, a tough chicken, or a sack of mediocre potatoes." Incidentally Madame Corneau relates an amusing story in which mention is made of rather a novel kind of remedy. In Paris "there are a large number of 'médecins-fonctionnaires' (official doctors)," one of them being attached to the Comédie Française. During a performance an actress was suddenly taken ill and fell fainting on the floor. The ticket-taker, who apparently was present, had noticed the medical man's pass among those that had been presented, so "an 'ouvreuse' (a woman usher)" was hastily sent in front to summon him behind the scenes. Arriving post haste, the first thing the ostensible physician did was to order everyone out of the "loge," where the unconscious patient had been carried. Then approaching her he shook her gently and said: "Madame, I much regret, but I am only a hardware merchant. Dr. X—— is out of town, and kindly lent me his pass; what ought I to do for you?" Upon this, so great was her surprise, the lady forthwith regained her senses!

TREATISES BY GALEN.

IN the British Museum there are several Syriac manuscripts containing translations of treatises by Galen, dating from the seventh, eighth, and eleventh centuries and recently Professor Gottheil of Columbia University, United States, under the title of "Contributions to Syriac Folk-Medicine" has published a manuscript in the *Bibliothèque Nationale* which consists of extracts from Syriac materia medica (see Journal of the American Oriental Society, vol. xx.). They relate only to diseases of the eyes, scalp, ears, and throat. The manuscript is quite a late one, but a copy of evidently an ancient text, and is really based upon Galen's *περὶ συνθέσεως φαρμάκων τῶν κατὰ τόπους βιβλία, ι.* (see Kuhn's Galen, vol. xii.). The remedies recommended are of the most absurd folk-lore description and in most cases are quite useless, and we only allude to their publication for the benefit of any reader who may be making a selection of such, sometimes unsavoury, medical matters, or of scholars desirous of knowing any manuscript that may throw light upon the correct text of Galen's works. A curious coincidence with regard to Galen and the New Testament may be mentioned here. In his "De Sanitate Tuenda" he tells us that the finest eye-salve was made at Laodicea. Now, in Revelations iii., 18, the "Angel," or personification of Laodicea, is advised to anoint his eyes with eye-salve, which thus evidently was connected with the products of the city.

CREAM DRINKS.

MESSRS. KOPS of Eagle Mills, London, S.E., are introducing a method of preparing temperance beverages which claims some notice. The apparatus consists in reality of a small portable churn by which the beverage is sharply agitated upwards and downwards. This is done by placing the beverage in a glass on the platform of the apparatus which moves rapidly up and down by means of a crank attached to a wheel provided with a handle. The effect of rapidly shaking milk in this way is to give it a peculiarly creamy and attractive flavour. A series of flavourings are prepared, including coffee, vanilla, strawberry, and raspberry, for use with the milk. The coffee and vanilla flavourings are particularly good and are evidently prepared by adding the genuine respective essences to crystalline sugar. We could find no objectionable ingredients in them. The apparatus may be hired and it may be seen in operation at many refreshment bars. In summer ice-scrapings may be used, while in winter the preparation may be warmed. An ice-plane for obtaining ice-shavings is included in the equipment. The method provides a decidedly wholesome beverage and is entitled to commendation since it is calculated to reduce indulgence in alcoholic drinks.

"DICKENS'S DOCTORS."

WE have received from Messrs. Carnrick and Co., Limited, a little circular in which written testimonials to the merits of their preparations are interleaved with illustrations of the medical men portrayed by Dickens. Some of the sketches are happy, Mr. Losberne, for example, and Mr. Jobling. Mr. Chillip and Dr. Slammer do not realise our ideals. But, where is Bob Sawyer and where is Sir Tumley Snuffim? It will be remembered that Bob Sawyer did not remain merely a medical student. He eventually became a medical practitioner at Bristol, where, although he was not very successful, we feel certain that he was a more reputable representative of the medical profession than the titled attendant of Mrs. Wititterly. Sir Tumley Snuffim is one of Dickens's cruellest portraits, exaggerated in the twopence-coloured way in which the characters in "Nicholas Nickleby" are exaggerated, but possessing certain features of probability

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Science.—There are only a few cases recorded in which it has been possible to isolate with certainty the bacillus typhosus from suspected water-supplies during epidemics of enteric fever. Further, unless the specific pollution is continuous it is extremely unlikely that typhoid bacilli will be detected in a water if more than a week has elapsed since the actual pollution occurred. Thus in the case of the typhoid fever outbreak at Maidstone, Dr. J. W. Washbourn made a bacteriological examination of the infected water about 10 days after the specific infection had taken place but he failed to find the bacillus typhosus though the presence of bacillus coli indicated sewage contamination. It is doubtful, also, whether in the Worthing epidemic the bacillus typhosus was identified though there was no doubt again about the bacillus coli. It follows, therefore, that as time elapses since the pollution occurs it is more difficult to detect it by bacteriological processes, and this is particularly so when waters of original purity are under examination. Bacteriological examination, however, is certainly a much more delicate means than chemical analysis of diagnosing sewage contamination although it may fail to reveal the specific pathogenic organism. It is possible that if the typhoid bacillus existed in a sample of water which was declared to be chemically pure no evidence of its presence would be gained on making a bacteriological examination some days after the water had been drawn. Many experts hold the view that a water containing typhoid bacilli could not show chemical purity. In their report on the Maidstone water Mr. M. Adams and Dr. Washbourn agreed that proof of pollution of water may be obtained either from chemical or bacteriological examination. In all cases it is necessary to examine a considerable quantity of the water for the specific organism of typhoid fever. Diagnosis, it seems to us, both by bacteriological and chemical means, can only be trustworthy, strictly speaking, by systematic periodical examination, the variations in the composition and flora being the surest sign-posts of danger.

K. M. D.—The Lunacy Act mentions only "idiots, lunatics, and persons of unsound mind"—a feeble-minded person need not (and often does not) come under such designation. There is in such a case no need of a licence, but our correspondent had better get a medical opinion as to the degree of feeble-mindedness present. It may possibly amount to imbecility which would require *certification*, and due notice would then have to be sent to the Commissioners in Lunacy. Nothing further is required (and no licence) *if only one single patient* is taken. If more are taken a request for licence must be made to the Commissioners in Lunacy, 66, Victoria-street, S.W.

H. C.—Articles on Delorme's operation for empyema will be found in the following papers: Contribution de la Chirurgie de la Poitrine. 7e. Congrès de Chirurgie, Paris, 1893, page 422; Traitement des Empyèmes Chroniques par la Décortication du Poumon, Congrès de Chirurgie, Paris, 1896, page 379; Traitement des Empyèmes Chroniques, Académie de Médecine, Paris, Jan. 23rd, 1894, *Semaine Médicale*, 1894, page 36; also in an article by Cestan, *Archives Générales de Médecine*, 1897; and in one by Ferrier and Raymond, Chirurgie de la Plèvre et du Poumon, Paris, 1899, published by Alcan.

W. A.—Our pamphlet "Difficulties under the Infectious Diseases Notification Act" explains the situation. As a general rule each informant is entitled to the fees.

X. Y. Z.—We regret to be unable to suggest an institution. There is, as yet, no accommodation of the kind for persons unable to pay, and to pay well, for it.

ERRATUM.—In our analytical notice last week of the baking powder made by the Fosco Manufacturing Co., the proprietary title of the preparation, and of the company also, should have been written *Fosco* and not "Phos. Co."

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Oct. 24th, 1901.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain-fall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Oct. 18	29·40	SSW	0·02	67	58	53	55	57	Cloudy
,, 19	29·61	S.	0·43	90	60	47	48	49	Fine
,, 20	29·81	S.W.	...	85	58	44	50	50	Foggy
,, 21	29·74	S.E.	...	64	54	40	42	43	Foggy
,, 22	29·80	S.E.	0·01	58	54	43	47	48	Raining
,, 23	30·01	W.	0·05	74	63	44	44	45	Foggy
,, 24	30·14	S.W.	0·01	64	53	43	44	45	Cloudy

During the week marked copies of the following newspapers have been received:—*Wiener Medicinische Blätter, Leeds and Yorkshire Mercury, Yorkshire Post, Liverpool Daily Post, Mining Journal, Surrey Advertiser, Thrapston and Raunds Journal, Scranton Weekly Republican (U.S.A.), Daily Argus (Birmingham), La Belgique Médicale, Coventry Reporter, Scientific American, Bristol Mercury, Standard, Optician, Indian Engineering, Montreal Medical Journal, Boston Medical and Surgical Journal, Journal of Physical Therapeutics, Berliner Klinische Wochenschrift, Building News, Reading Mercury and Oxford Gazette, Glasgow Daily Record, Windsor and Eton Express, Globe, Yorkshire Herald, Pall Mall Gazette, Allgemeine Medicinische Central-Zeitung, Hertfordshire Mercury, Canadian Practitioner and Review, Felixstowe Visitors List, Journal of Commerce, Hong-Kong Weekly Press, Jewish World, The Torquay Directory and South Devon Journal, &c.*

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (28th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.) West London (2.30 P.M.), London Throat (2 P.M.).

TUESDAY (29th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

WEDNESDAY (30th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.).

THURSDAY (31st).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

FRIDAY (1st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square, (9.30 A.M.)

SATURDAY (2nd).—Royal Free (9 A.M. and 2 P.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.), Throat, Golden-square (9.30 A.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (28th).—MEDICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—8.30 P.M. Paper: Dr. A. Elliott and Dr. J. W. Washbourn, C.M.G.: Typhoid Fever in South Africa. (Council Meeting Night.)

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (20, Hanover-square, W.).—7 P.M. Council. 8 P.M. President's Inaugural Address. Communications:—Mr. F. C. Wallis: Misplaced, Unerupted Wisdom Tooth treated by External Operation.—Mr. J. G. Turner: The Teeth of Cretins and Microcephalics.—The President and Mr. L. Payne: Notes on the Dentition of Sphenodon.

WEDNESDAY (30th).—BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. General Meeting. Ordinary Meeting. Address by Dr. D. Kerr (in-coming President). Paper:—Dr. Houchin: Aix Treatment of Syphilis in London.

THURSDAY (31st).—NEUROLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—8.30 P.M. Cases:—Dr. Ferrier: A Case of Successful Removal of Cerebellar Tumour.—Dr. Ferrier and Dr. A. Turner: A Case of Successful Removal of a Cerebral Tumour. Dr. Hutchison: A Case of Hemiplegia with Mental Deficiency in a Child.—Dr. Head: (1) A Case of Muscular Atrophy, probably of Neuritic Origin; (2) a Case for Diagnosis; (3) a Case of Wrist-drop. Dr. Muskens will demonstrate Lantern Slides illustrating the Segmental Distribution of Sensory Changes in Tabes and Epilepsy.

FRIDAY (1st).—WEST LONDON MEDICO-CHIRURGICAL SOCIETY (West London Hospital, Hammersmith-road, W.).—8.30 P.M. Ordinary Meeting.

LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—5 P.M. Cases will be shown by Mr. Spencer, Dr. Donelan, Dr. St Clair Thomson, Mr. Westmacott, Dr. Tilley, Dr. St. George Reid, Mr. Lake, and Mr. Waggett.

WEST KENT MEDICO-CHIRURGICAL SOCIETY (Royal Kent Dispensary, Greenwich-road, S.E.).—8.45 P.M. Paper:—Mr. G. C. Williams: High Frequency Electrical Currents in the Treatment of Certain Diseases.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (28th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. M. Morris: Clinique. (Skin.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Ball: The Examination of the Throat and Nose.

TUESDAY (29th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. H. Campbell: Clinique. (Medical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Baldwin: Minor Surgery.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Dr. Ferrier: Amyotrophic Lateral Sclerosis.

WEDNESDAY (30th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. A. H. Tubby: Clinique. (Surgical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Eccles: Surgical Anatomy.

LONDON THROAT HOSPITAL (204, Great Portland-street, W.).—5 P.M. Dr. Stoker: Impaired Movements of Vocal Cords. (Post-Graduate Course.)

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Perkins: Pneumothorax.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL (Gray's Inn-road, W.C.).—8 P.M. Dr. D. Grant: The Examination of the Throat and Nose.

THURSDAY (31st).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. Hutchinson: Clinique. (Surgical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Keetley: The Operative Treatment of Fractures.

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Mr. Collier: Clinical Demonstration.

CHARING-CROSS HOSPITAL.—4 P.M. Mr. Boyd: Surgical Cases. (Post-Graduate Course.)

LONDON TEMPERANCE HOSPITAL (Hampstead-road, N.W.).—2 P.M. Dr. S. Fenwick: Clinical Demonstration.

FRIDAY (1st).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. R. Lake: Clinique (Ear).

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Saunders: Therapeutics.

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